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Beating Time:

Refining Learned Repertoire for Percussion Instruments

in an Orff Ensemble Setting

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Beating Time:

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in an Orff Ensemble Setting

by

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Dedication

This dissertation is dedicated to my spouse, Bruce Jarstfer. Without his emotional,

financial, and spiritual support, I could never have pursued a second doctoral degree.

Acknowledgements

I would like to acknowledge the members of my committee who so graciously donated their insight, support, and time to the completion of this study. My supervisor, Judith Jellison, has been a constant source of intellectual and personal support during the entire degree program. Her example of mentorship is one I wish to emulate throughout my own career. I would also like to thank Robert Duke for his unique insight into research procedures and teaching excellence within instrumental instruction. His enthusiasm for research, learning, and life itself has served as a continual source of inspiration. I am also grateful to have had the opportunity to work with Eugenia Costa-Giomi. Her experience with early childhood learning provided valuable insight and helped foster ideas regarding the implications of results found in this study. Similarly, Hunter March's creative approach to pedagogy with young learners provided an exceptional basis with which to view teachers' instructional processes. Likewise, Laurie Scott's example of teaching excellence and her vast experience in the public schools provided valuable insight for this study. Finally, I would like to thank Lowell Bethel for his support and practicality in constructing a study that would be both worthwhile and feasible within the time constraints of finishing a doctoral program.

Beating Time:

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The purpose of this study was to examine the teaching practices of recognized Orff-Schulwerk instructors as they worked to refine learned repertoire for percussion instruments. Eight Orff-Schulwerk instructors and their upper elementary students were videotaped in four group rehearsals. Systematic analyses of rehearsal frames in which teachers were working to improve student performance revealed fast teacher pacing and a predominance of instructional directives that were procedural (e.g., where to begin playing) rather than musical (e.g., how to perform more accurately or expressively).

Students performed successfully in only 29% of all performance trials, irrespective of the targets (proximal goals) identified by the teachers. The majority of students' performance problems were related to precision, often caused by rushing the

underlying pulse. In approximately half of the student performance trials, teachers

identified targets prior to initiating student performance: targets were most often related

to technique (e.g., how to hold mallets), rather than to the most salient problems of pulse

and precision. Students successfully accomplished proximal goals in approximately 63%

of the performance trials in which the targets were verbalized by the teacher prior to

performance and in approximately 74% of the performance trials when the targets were

verbalized by the teachers while the students were playing. Students were most

successful when teachers utilized clear, explicit directives and positive modeling.

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CHAPTER ONE

Introduction

In many American elementary schools, music classes are a requirement, rather than an elective, providing music teachers with the unique opportunity to provide instruction for every child in school. Skilled teachers know how to maximize learning potential during these years to lay a firm foundation of expressive musicianship. Through a variety of age appropriate activities, teachers can engage students in experiences that represent a diversity of musical styles and genres. Typical activities often include singing, playing instruments, movement, and guided listening (Forsythe, 1977; Orman, 2002; Price & Hardin, 1990; Wang & Sogin, 1999).

These activities, and more, reflect the diversity of educational goals within music instruction proposed by the Consortium of National Arts Education Associations in *National Standards for Arts Education: What Every Young American Should Know and Be Able to Do in the Arts* (1994). The nine voluntary national standards for music education, addressed separately in *The School Music Program: A New Vision* (1994), encourage teachers to provide instruction in singing; playing instruments; improvisation; composition; reading, writing, listening to, describing, evaluating, and analyzing music; understanding relationships between music, the other arts, and disciplines outside of the arts; and to understand music in relation to history and culture.

Providing meaningful instruction in all these areas can be quite challenging.

Given the limited instructional time and resources available to most teachers, Jellison (in press) suggests that the elementary music curriculum is overcrowded, and that music performance should be the core of the curriculum.

Instructional time was one of the core components examined in a nationwide survey of arts by the National Center for Education Statistics (NCES). For the 1999-2000 academic year, NCES reported that 94% of schools surveyed provided music instruction and that 73% of these schools engaged students in music classes once or twice per week in class periods lasting approximately 38 minutes. Further calculations demonstrated that the average elementary student received just 46 hours of music instruction per year. Forty-three percent of the schools provided just 26 to 40 hours of instruction per year (Carey, Kleiner, Porch, and Farris, 2002).

Time constraints alone make efficient and effective teaching a challenge for elementary music instructors. Teaching performance skills is particularly challenging, requiring thoughtful, progressive instruction that will lead to refined music making by confident, competent students. Although many individuals have examined singing instruction at the elementary level, few have examined elementary instrumental instruction using student achievement as a dependent measure. The purpose of this dissertation is to examine how elementary music teachers refine learned repertoire for percussion instruments within the confines of limited instructional time.

Research has shown that children often cite instrument playing as one of their favorite activities in elementary general music classes (Bowles, 1998; Murphy & Brown,

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1986; Nolin, 1973) and that they remain on-task when engaged in this activity (Forsythe, 1977; Moore, 1987). In fact, although attitudes toward general music often become increasingly negative as elementary students approach pre-adolescence (Nolin, 1973; Vander Ark, Nolin, & Newman, 1980), preferences for playing instruments may remain positive (Nolin, 1973), thus possibly helping to combat declining attitudes toward other content areas in music (Pogonowski, 1985).

One of the most popular methods used to introduce elementary children to instrumental study is Carl Orff's pedagogy, commonly referred to as the Orff Schulwerk.[1] Orff conceived his ideas in the 1920's with Dorothee Günther at the Güntherschule in Munich. His pedagogy expanded traditional ideas of music education by creating a method that allowed students to actively participate in music making before learning the intricacies of notation. By meeting students at their own level of development, teachers fostered a noncompetitive learning environment designed to encourage creative expression. As word spread, teachers from around the world began requesting materials for their own use.

Sharing his pedagogical ideas presented a dilemma for Carl Orff. He feared that publication might encourage teachers to abandon his major tenets of creative expression through improvisation in favor of rehearsing pieces as set compositions (Orff, 1976/1978). Conversely, he knew that without publication, his ideas would remain geographically limited. Although students at the Güntherschule routinely presented

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[1] According to Shamrock (1995), "The term 'Orff-Schulwerk,' with the hyphen, since 1988 should apply only to publications issued by Schott, Inc., and its affiliates, and to the title 'American Orff-Schulwerk Association.'" (Foreward)

rehearsed pieces along with improvisations in small concerts, creativity constituted the core of their curriculum.

Fortunately, time has demonstrated that publication and performance have enriched the Orff Schulwerk, rather than diluting its philosophical base. Materials published by certified Orff Schulwerk teachers continue to emphasize elemental aspects of creativity through question and answer episodes, expressive movement, and free improvisation between instrument families. Most of these improvisations occur over one or more ostinati, making them an interesting combination of set pieces with improvisatory elements. Even pieces without improvisation are still composed on the basis of what Orff referred to as "elemental music": music derived from natural rhythms found in speech and movement. As employed in the earliest days at the Güntherschule, these pieces may be restricted to classroom use or may be presented in public performance, at the teacher's discretion.

Regardless of the manner in which teachers choose to use available materials, all Orff Schulwerk educators face the challenge of teaching children to play with accuracy and artistry. The unique characteristics of elementary Orff Schulwerk instruction within American public schools often make this task extremely difficult. In addition to time constraints discussed earlier, the size and weight of many instruments makes practicing at home impractical. Furthermore, students in Orff ensembles usually learn their music by rote and must remember what they have learned between rehearsals, which are often separated by two to five days. Finally, playing multiple percussion parts with precision is a difficult task, due in part to the fact that most percussion instruments have relatively

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short sustaining capabilities. Thus, if the initial attack of each note lacks precision, there is little sound afterwards to mask the problem.

Although many Orff publications and training courses provide excellent information to help teachers meet these challenges during the introductory stages of note learning, virtually none discuss the issue of refining student performance after the notes have been learned. Literature is abundant examining the history and philosophy of the Orff Schulwerk pedagogy as well as its curricular role in the classroom. The creative aspects of improvisation and composition have been discussed as have aspects of multiculturalism in philosophy and process. Additionally, several studies have examined the effects of Orff Schulwerk learning on the acquisition of nonmusic skills such as reading, mathematics, spatial ability, and memory. Still others have examined Orff Schulwerk learning in the context of therapeutic benefits derived from music therapy. To date, no one has examined how American Orff Schulwerk educators address issues associated with refining learned repertoire. In other words, no one has examined how teachers help students progress from merely playing notes to performing music with artistry.

Purpose of the Study and Research Questions

The purpose of this dissertation was to examine teacher effectiveness in an Orff ensemble setting using student achievement as a dependent measure. Eight recognized elementary Orff Schulwerk certified teachers and their students were videotaped across four rehearsals as they rehearsed learned repertoire for percussion instruments. All

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ensembles consisted of upper elementary students between Grades 3 and 6, with most students in fourth and fifth grades. Five teachers were observed as they worked with after school ensembles designed to prepare performances; two teachers were observed in their regular classrooms; and one teacher was observed teaching an after school Orff club designed for students who wanted to participate in an Orff ensemble as an enrichment activity. Specific research questions included the following:

1. In an Orff ensemble rehearsal, what behaviors do teachers and students exhibit during the rehearsal of learned repertoire for percussion instruments?

2. How often do students perform successfully?

3. What conditions are associated with student improvement?

4. What targets do teachers identify, and how often do students achieve these targets in subsequent performance trials?

Limitations of the Study

Students in a typical Orff Schulwerk program engage in a variety of activities involving pitched and nonpitched percussion instruments, recorders, singing, and movement. While all these activities are worthy of research, this study was limited to instruction with pitched and nonpitched percussion instruments. Singing, movement, and recorder playing were not evaluated in this study. Additionally, this study is limited to instruction beyond the initial note learning stages, when teachers are working to refine student performance. Therefore, rehearsal segments involving initial presentation of material were excluded from analysis in this study.

Of the eight teachers chosen for this study, seven reside in Central or South Texas, and one lives in Florida. In order to be chosen for this study, teachers had to have obtained Level I certification or higher from the American Orff-Schulwerk Association (AOSA) and meet one or both of the following criteria: (1) invitation to perform at a state or national conference, and or (2) recommendation by an Orff chapter president, school district music supervisor, or university professor. Although every attempt was made to locate the best Orff Schulwerk teachers available nationwide, subjects in this study represent a limited geographic region and may not reflect the practices of Orff Schulwerk teachers in other areas of the country. Finally, each teacher and their students were taped across four rehearsals in their regular settings. While these samples provided a wealth of information, they do not necessarily reflect possible changes in teaching strategies affected by calendar events throughout the academic year.

Definition of Terms

Research examining teacher-student interactions has resulted in terminology used to describe the teaching and learning process. Terms appearing frequently in this study are defined below:

Target: Proximal performance goal identified by the teacher (Buckner, 1997; Cavitt 1998; Colpritt, 2000; Derby, 2001; Duke, 1994, 2000).

Trial: Student performance as directed by the instructor. Off-task practicing during instruction is not identified as a trial.

Rehearsal Frame and Rehearsal Frame Group (RFG): Duke (1994, 1999/2000) defined a rehearsal frame as a period of time during a rehearsal in which a teacher has identified a specific target for improvement and is working to improve that aspect of student performance. The Rehearsal Frame begins when the teacher identifies the target and ends upon the identification of a new target. Adapting this model to analyses of choral rehearsals, Derby (2001) created Rehearsal Frame Groups (RFGs) using passages of repertoire as the unit of analysis. Rather than being defined by targets, Rehearsal Frame Groups are identified when the teacher repeats a passage of repertoire twice or more in an effort to achieve student improvement. Within this passage, one or more targets may be addressed. A new Rehearsal Frame Group is identified when the teacher moves on to another target passage in the piece.

Rehearsal Frame Groups were used as units of analysis within this study with one modification. As in Derby's study, multiple targets were identified within a passage of repertoire. However, because Orff teachers typically require all students to learn all instrumental parts, an entire rehearsal may focus on one passage of repertoire in which students work on various instrumental parts. Thus in this study, Rehearsal Frame Groups were organized according to the instrumental group(s) with which the teacher was working. Thus, if a teacher spent 10 minutes working on the bass xylophone part, 5 minutes working on the alto xylophone part, and another 7 minutes putting both parts together, each period of time constituted a separate Rehearsal Frame Group.

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CHAPTER TWO

Review of Literature

The Orff Schulwerk pedagogy is one of the most popular methods used in elementary music education today, yet it was originally conceived as a system of music education for adults. In fact after its initial conception in Munich during the 1920's, it took over 20 more years before the pedagogy became oriented primarily to children. Since that time, the method has exploded from its modest beginnings in Munich, Germany to geographical regions throughout the world. An examination of available literature demonstrates that musicians have studied the Orff Schulwerk pedagogy from a variety of perspectives, yet few if any have used systematic research to study teaching effectiveness during the rehearsal of learned repertoire using student achievement as a dependent measure. In fact, most studies of teaching effectiveness in music education within other genres such as bands, choirs, and private lessons have used dependent measures other than student achievement. As a result, we have a creditable amount of information regarding how people perceive teaching effectiveness and the variables that affect these perceptions. Yet, we still do not have an abundant source of data detailing what teachers do that results in student improvement.

The purpose of this chapter is twofold: (1) to provide information detailing the philosophy, history, and progression of the Orff Schulwerk pedagogy, and (2) to review

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extant research examining teaching effectiveness in all disciplines of music instruction including bands, choirs, orchestras, general music classrooms, and private lessons.

Orff Schulwerk: Philosophy, History, Pedagogy, and Research

Philosophy

The Orff Schulwerk pedagogy is one of the most pervasive and popular methods used in elementary music classrooms today. According to the American Orff-Schulwerk Association (AOSA), over 10,000 teachers incorporate the Orff Schulwerk process into their curriculum. Although playing instruments is an important facet in the Orff Schulwerk, it by no means encompasses all the activities that make up this unique pedagogy. Konnie Saliba writes, "Orff-Schulwerk can be defined as a pedagogy to organize elements of music for children through speaking, singing, playing, and dancing." (Saliba, 1991, p. vii).   The American Orff-Schulwerk Association (AOSA) provides the following description on their website (2004, http://www.aosa.org):

Orff Schulwerk is a way to teach and learn music. It is based on things children like to do: sing, chant rhymes, clap, dance, and keep a beat on anything near at hand. These instincts are directed into learning music by hearing and making music first, then reading and writing it later. This is the same way we all learned our language.

Orff Schulwerk happens in a non-competitive atmosphere where one of the rewards is the pleasure of making good music with others. When the children

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want to write down what they have composed, reading and writing find their moment.

Orff Schulwerk uses poems, rhymes, games, songs, and dances as examples and basic materials. These may be traditional or original. Spoken or sung, they may be accompanied by clapping and stamping or by drums, sticks, and bells.

The special Orff melody instruments include wooden xylophones and metal glockenspiels that offer good sound immediately. Played together as in a small orchestra, their use helps children become sensitive listeners and considerate participants.

With Orff Schulwerk, improvisation and composition start students on a lifetime of knowledge and pleasure through personal musical experience. Learning is meaningful only if it brings satisfaction to the learner, and satisfaction arises from the ability to use acquired knowledge for the purpose of creating. For both teacher and student, Orff Schulwerk is a theme with endless variation.

The title "Schulwerk" is an indication of the educational process taking place: Schulwerk is schooling (in music) through working, that is through being active and creative.

In AOSA's *Guidelines for Orff Schulwerk Teacher Training Courses: Levels I, II, III* (1997), the purpose of Orff Schulwerk is explained as follows:

The purpose of Orff Schulwerk is to awaken the artistic potential in every individual and offer a context in which this can be exercised. The Orff Schulwerk

approach as a model for learning involves a much broader spectrum of artistic

activity than is traditionally included in *music*. . . . It is not intended to develop

highly accomplished performers. The emphasis is on process rather than

performance; on participation by all, each at his or her own level; on the

cultivation of skills for creating and developing ideas within music and dance

rather than reproducing set forms. Learning results from the mutually stimulating

interaction of instructor and students, the freedom and opportunity to take risks,

and the accomplishment of creative tasks appropriate to each stage of

development (p. vi).

The statement above ("The emphasis is on process rather than performance; on

participation by all, each at his or her own level; on the cultivation of skills for creating

and developing ideas within music and dance rather than reproducing set forms.") may

seem contradictory to individuals who have received numerous materials in Orff

workshops and AOSA teacher training courses that are quite suitable for classroom

rehearsal and performance. Yet, what sets these compositions apart from beginning

band, orchestra, and piano pieces is that they are written to incorporate Orff's concepts of

elemental music, based on natural rhythms found in speech and movement. Thus, when

teachers rehearse such pieces for classroom use or even performance, they are working

with music that emerges from organic sources natural to human expression, rather than

contrived music so often seen in beginning instrumental method books. In addition to set

instrumental ostinati, many of these works contain elements of improvisation, such as the

eighth movement of Five Golden Rings (Kriske & DeLelles, 1985). This small jazz piece

based on the "Eight Maids a'Milking" from "The Twelve Days of Christmas" includes improvisatory question and answer parts for students playing temple blocks and conga drums as well as a part for improvisatory scat singer. Other movements are filled with speech canons, movement, recorder playing, and singing.

An examination of the Schulwerk's historical development as outlined in the third volume of Orff's eight-volume autobiography ("The Schulwerk," Orff, 1976/1978), demonstrates that the compositional elements inherent in elemental music have served as a core of creative expression from its inception to the present day. The following material represents a summary of information contained in this book.

History

Dance and Elemental Music

Orff opens the third volume of his autobiography with the following quote: "Dance stands nearest to the roots of all the arts." (Orff, 1976/ 1978). In fact, dance was the initial force that ultimately shaped Orff's musical philosophy in the Schulwerk. In Post-World War I, a new dance movement had captured the attention of artists in Munich, leading to numerous amateur performances. At one such recital in 1914, Orff met Mary Wigman, a dancer who had studied with Dalcroze and Laban. After the performance, she invited Orff to her studio to share her experimental ideas and approach to dance. Orff describes walking into an almost empty room with nothing but a changing screen, drums, rattles, and recorders. Then he writes, "Suddenly she stood there. Wild, tall, electric. Almost like fury. And she danced the witches' dance. She danced other

things too: dreamlike tenderness. Now I knew everything. She was the greatest dancer

of the time” (Orff, 1976/1978, p. 7). Orff continues,

> The art of Mary Wigman was very significant for me and my later work.
>
> All her dances were animated by an unprecedented musicality, even the
>
> “musicless” witches’ dance. She could make music with her body and
>
> transform music into corporeality. I felt that her dancing was elemental.
>
> I, too, was searching for the elemental, for elemental music. . . . All this
>
> gave me new insights and a new outlook even if my own work belonged
>
> elsewhere. As a musician I obeyed different laws (Orff, 1976/1978, pp. 6-
>
> 7).

Nine years later in 1923, Orff met another dancer, Dorothee Günther, with whom

his collaboration would set the Schulwerk in motion. Like Wigman, Günther had studied

with Dalcroze and Laban. Additionally, she was a painter, writer, and theater producer.

After initially collaborating as Orff’s librettist for his *Orfeo*, conversations eventually

turned to a school for dance incorporating gymnastics, rhythmic dance, and expressive

dance. Orff expressed the desire to incorporate music education in the school, using a

style of music he dubbed “elemental music.” This new elemental music would replace

traditional, passive music education with an active, participatory pedagogy that required

no prerequisite musical knowledge. Using the rhythmic elements inherent in speech and

movement, students would experience music naturally, learning notation only after they

had participated in numerous musical activities under their instructor’s supervision.

Günther agreed that music should be an inherent part of movement education, and in 1923, they met with officers of the Mesendieck Society to present a plan for a school incorporating music and dance. Officials embraced their concepts and approved the opening of the Güntherschule in Munich the following year. The Guntherschüle opened in September 1924 with 17 female students between the ages of 18 and 22 who committed to training for two to three years. In addition, evening courses were provided for over 100 non-professional students. Orff was in charge of music education, while Günther and three other instructors supervised gymnastics, rhythmics, and dance.

Orff's approach to elemental music was influenced in part by his relationship to Curt Sachs, the internationally famous director of the Staatlichen Musikinstrumenten-Sammlung (State Collection of Musical Instruments) in Berlin. In their first conversation about a new elemental music, Sachs was initially reticent; however, after further conversation, he began to visualize and understand Orff's new ideas. Orff quotes Sachs as saying:

> With your plan you are following aims that are entirely your own and you
> intend by these means to reach sources that are otherwise neglected or
> overlooked. You want to find the source of all beginnings. The more I
> think of it the more I believe that you of all people will by this means
> receive important stimuli for the music and your ideas. The elemental is
> your element, and, if I understand your far-reaching exposition correctly,
> you will rediscover it there" (Orff, 1976/1978, p. 14).

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The phrase that remained in Orff's consciousness after his meeting with Sachs was, "In the beginning was the drum" (Orff, 1976/1978, p. 15). Orff writes:

The drum induces dance. Dance has the closest relationship to music. My idea and the task that I had set myself was a regeneration of music through movement, through dance.

It is difficult to teach rhythm. One can only release it. Rhythm is no abstract concept, it is life itself. Rhythm is active and produces effects, it is the unifying power of language, music and movement (Orff, 1976/1978, p. 17).

Instruments

In order to facilitate the goals of elemental music, Orff began with the human body to create rhythms by clapping, snapping, and stamping. Instruments included simple, nonpitched percussion instruments such as double skinned drums; hand drums; rattles made from stones, shells, and dried fruits; jingles; and tambourines. The music itself was improvisatory over simple ostinato patterns. In order to help facilitate free improvisations, Orff encouraged students to transfer the natural syllabic accents of words and sentences to the drums.

In addition to rhythmic exercises, all students received instruction in piano improvisation. The drone, a perfect fifth serving as a pedal point, functioned as an ostinato, above which melodies could be improvised according to each student's ability. In time, two students learned to improvise with each other at the same keyboard. Various

modes, scales, rhythmic patterns, and forms were all subjects for improvisation and experimentation. Pentatonic scales, lacking the half-steps that would imply traditional harmonies, were especially suitable for improvisation.

Although improvisation was a staple part of elemental music, school performances began to incorporate learned repertoire as part of their programs. After a few initial performances incorporating gymnastics and dance without accompaniment, standard Western art music was added to accompany dancing. Eventually Karl Marx, a former student, created a choir to perform choral pieces. At times, the choir danced as they sang, and they even began to experiment with choral improvisations using pentatonic scales. In some concerts, audiences participated in these choral improvisations. Thus, prepared art music was performed in conjunction with improvisation.

In addition to Karl Marx, two other pupils eventually joined the Güntherschule faculty. Maja Lex, an accomplished dancer and musician, and Gunild Keetman, a skilled musician and dancer, were added to the faculty roster in 1925 and 1926, respectively. Lex founded the Güntherschule Dance Group in 1930 which danced to music composed by Keetman. Describing Keetman, Orff offered the following: "I am not exaggerating when I say that without Keetman's decisive contribution through her double talent, 'Schulwerk' could never have come into being" (Orff, 1976/1978, p. 67).

Although compositions were written to accompany the dance group, much music was still improvised using a percussion orchestra. Instruments in the orchestra included timpani, dance timpani (a single-skinned, cylindrical tunable drum in various sizes, but

lacking the tradition "kettle" of timpani), bass drums, tenor drums, Chinese tom-toms in various sizes, tambourines, wood blocks, castanets, triangles, glockenspiels, cymbals, and tam-tams. Improvisations were led by conductors using nontraditional gestures to generate a variety of sound effects.

A decisive turning point in the development of the orchestra's instrumentation occurred in 1926 when Orff met two Swedish sisters who spoke of their experiences hearing Chinese and Javanese Gamelan orchestras. Recognizing Orff's obvious interest in the xylophone, they promised to inquire about purchasing one for the Güntherschule. Although Orff appreciated their intentions, he did not expect they would be able to procure such an unusual instrument. A few weeks later, he was surprised to receive a large African xylophone with a note from the sisters sending their best wishes. Keetman immediately began practicing the new instrument and creating improvisations with the nonpitched percussion instruments of the Orff orchestra. These experiments led to Lex's dance study entitled "Stäbetanz" (Dance of the Marimba Bars), which was used in a variety of subsequent performances. Importantly, this was Keetman's first composed piece including a marimba part.

Successful experimentation with the African xylophone inspired Orff to expand his orchestra at the Güntherschule with more xylophones. However, a brief consultation with Sachs discouraged him from pursuing the idea further. The tuning of African xylophones was different from Western tuning, and material for the instruments would be difficult to obtain for multiple instruments. Instead, Sachs encouraged Orff to expand the orchestra with recorders. After some initial reluctance, Orff agreed that recorders, in

their different sizes and available ranges, would be a reasonable alternative to the African barred instruments. Thus, Orff ordered a quartet of recorders (soprano, alto, tenor, and bass) from Peter Harlan in Markneukirchen, and members of the Güntherschule waited anxiously for the shipment of instruments to arrive.

Ironically, while waiting for the recorders, the Güntherschule received an unexpected shipment from a former student in Hamburg containing an instrument that would ultimately provide the key to creating xylophones with greater ease than had been previously imagined. The instrument, a Kaffir piano, was a small African xylophone purchased from a sailor in the Cameroons. Made with bars of palisander wood tied to a small wooden box with laces, the pitch of the Kaffir piano was closer to Western tuning than the larger African marimba, making it easier to incorporate into improvisations. Keetman quickly wrote a book containing pieces for the Kaffir piano with other percussion instruments.

Convinced that the Kaffir piano could serve as a model for other xylophones, Orff invited Karl Maendler, a harpsichord builder and inventor, to hear a performance of "Stäbetanz" with the large African marimba as well as some solo and improvised chamber pieces written with the Kaffir piano. After some discussion with Orff, Maendler soon created xylophones in the alto and soprano ranges based on the Kaffir piano. Because Maendler knew that the anticipated recorders were in D, he created a range of a 9th from D to E (see Fig. 1).
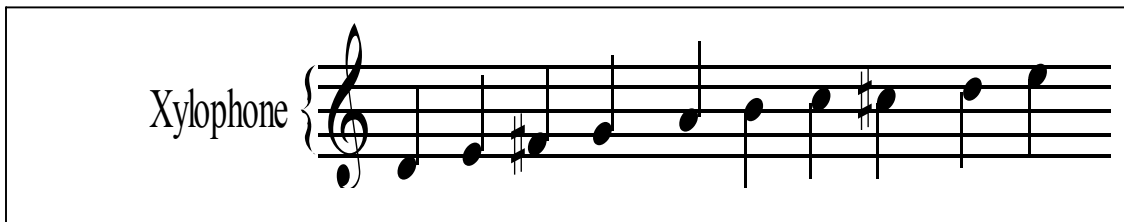
Figure 1. Range of Maendler's Alto and Soprano Xylophones

The bars were held in place with nails, allowing free interchange between different notes to create different keys. Later, Maendler created a tenor xylophone, unlike the alto-tenor xylophones available in today's market. Maendler's instrument was a 25-note chromatic instrument in a cradle-shaped box in which the bars were attached with laces. In 1932, he added a bass xylophone to the range and created metallophones, inspired from gamelan orchestras, yet based on his own previous xylophone models.

When the recorders arrived, Orff and his students were surprised to discover that the shipment did not contain any playing instructions. Without even simple fingering charts, the task of learning to play was left to the students and teachers. Not to be discouraged, Keetman began experimenting with the recorders and discovered the fingerings on her own. Using a drone and melody as a basis for experimentation, she began incorporating recorders and nonpitched percussion instruments into dance improvisations.

Publication

As the Orff Schulwerk grew and prospered, Orff wanted to share his ideas beyond the confines of Germany. The most plausible way of achieving this aim was to publish his materials. In this endeavor, he experienced internal conflict. Although performance was a part of the Orff Schulwerk, improvisation and creative composition were equally, if not more, important. Orff surmised that when he put examples of improvisation into the hands of a larger public, some individuals would simply rehearse the music as set pieces, thereby eliminating the creativity he sought to foster. However, refusal to publish would ultimately limit the scope of influence he wanted to have on music education. Thus, between 1931 and 1934, Orff collaborated with Schott, Mainz to publish several volumes of music under the title, *Orff-Schulwerk—Elementare Musikübung*. The first books explored rhythmic exercises and melodic experimentation, while later books incorporated ensemble pieces intended for performance. In the preface to *Spielstücke für kleines Schlagwerk*, the first book containing pieces for performance, Keetman writes:

> In these pieces the individual players are given the task of playing several instruments of different kinds at the same time. This will improve their playing technique and extend the diversity of tone colour in ensemble playing. . . . Aim at a performance from memory from the start in order to become deeply immersed in the tone qualities of the pieces.

> Should these pieces be used as an accompaniment to movement or dance it will then in any case be necessary to memorise them (Orff, 1976/1978, p. 133).

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Although Orff feared that creativity and improvisation might be lost through publication, in fact these tenets never disappeared and remain the stalwart feature of Orff instruction today. Performance served to enhance the Schulwerk, expanding the positive attributes of creativity already in place. The evolution of creative improvisation to refined performance was demonstrated in works written for Lex's and Keetman's dance group and dance orchestra. Importantly, Keetman and her students derived the music from the choreography. Once the choreography was set, the musical ideas generated and evolved until parts were assigned and written in sketch form to aid players' memory. Thus, the music generated from improvisatory ideals, but at some point, the players created a set composition that served as the accompaniment to the dance. Performances by the dance/orchestra group were heralded in Europe and America for their unique ability to meld movement and music together into a unified whole.

Beyond the Güntherschule

Orff's aim of expanding his educational ideas to the wider world through publication succeeded. After the first Schulwerk books were published, he received invitations to speak to professional educators. While speaking in Stuttgart, he met two powerful figures: Eberhard Preussner, and Leo Kestenberg. Preusnner was the Director of the Music Department of the Central Institute for Education and Training in Berlin, and Kestenberg headed the Music, Art, and Theater division of the Prussian Ministry of Culture, one of the primary supporters of the Berlin Akademische Hochschule für Musik. Kestenberg invited Orff to Berlin, whereby he unveiled a plan to introduce Orff's

educational ideas into Berlin's elementary schools. Unfortunately, just weeks after plans were made, Kestenberg was ousted from his post in Berlin by the Nazi party and forced to flee Germany. Orff's connection to Kestenberg made him suspect as well. Therefore, courses were no longer titled, "Orff-Schulwerk," but were instead named "Music and Movement." Meanwhile, Berthe Trümphy's Dance School joined the Güntherschule and became known as the Güntherschule Berlin. Günther continued as director of the Güntherschule in Munich, Trümphy directed the school in Berlin, and tutors between the two schools freely exchanged ideas.

While the Schulwerk was spreading among teachers throughout Germany, Orff's greatest opportunity for worldwide exposure came with an invitation to compose music for children's dances in Berlin's 1936 Olympic Games. Initially fearful of the possible political ramifications of performing in such a large venue, he was assured that the Olympics were viewed as an international event and would pose no serious threat. Upon agreement to participate, Orff enlisted the help of the Güntherschule faculty. Records of the music were made and distributed to approximately 6,000 children and young people engaged to perform the dances. Günther and Lex were responsible for choreography, and Keetman functioned as the director for rehearsals and performance. Although the performance was successful, few offers generated from the event, save an offer to perform at the next Olympic festival in Japan. The war hindered these efforts, thus no other Olympic performances were given.

In spite of growing political unrest, the Güntherschule persevered. The school moved to a larger facility in 1936, and the dance group continued performing. However,

transporting large percussion cases became increasingly difficult. Pianos were sometimes substituted for performance, thus undermining the overall artistic product. Tragically, on January 7, 1945, the Güntherschule was bombed destroying virtually all scores, photographs, and most instruments.

Bavarian Broadcasts

Although the school no longer existed, the Schulwerk found renewed opportunity for expansion rather unexpectedly three years later in 1948. While shopping in an antique store, Walter Panofsky purchased one of Orff's recordings from 1936 that had been used to help Berlin children learn their dances for the Olympics. He shared the recording with Annemarie Schambeck, who was in charge of Bavarian Radio's educational broadcasts. Intrigued with his music, she offered Orff the opportunity to write music for children that could be played and broadcast as a series of educational programs throughout Bavaria. This offer may be seen as one of the most transforming factors in the development of Orff Schulwerk as we know it today. Apart from the dances taught to children at the Olympics, Orff's Schulwerk had been devised for adult students. Even at the Olympic Games in 1936, adult students from the Güntherschule had made up the 30-piece orchestra. Now, Orff was being asked to direct his teaching efforts toward children. Regarding this new direction, Orff writes:

> To send out a series of programmes to hundreds of schools for
> thousands of children was an attractive idea, an idea of such dimensions as
> the one I had dreamt of with Kestenberg. If I had already had many years

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experience with Schulwerk it had nevertheless been with young people

and adults, and it had formed part of their professional training that

aspired to different educational and artistic aims. What I was now being

offered was something completely different. A music exclusively for

children that could be played, sung and danced by them but that could also

in a similar way be invented by them—a world of their own.

I was well aware that rhythmic training should start in early

childhood. The unit of music and movement, that young people in

Germany have to be taught so laboriously, is quite natural to a child. It

was also clear to me what Schulwerk had so far lacked: apart from a start,

in the Güntherschule we had not allowed the word or the singing voice its

fully rightful place. The natural starting point for work with children is

the children's rhyme, the whole riches of the old, appropriate children's

songs. The recognition of this fact gave me the key for the new

educational work. (Orff, 1976/1978, pp. 212-214).

With Keetman's aid, Orff began preparing materials for the programs. A small

group of children between 8 and 12 years old performed the music on the few surviving

instruments available from the Güntherschule, while Recktor Rudolf Kirmeyer, an

experienced teacher, provided information about the pedagogical process. Pedagogical

instructions were brief and simple, relying more on imitation than long, theoretical

explanations. Although only a few schools heard the initial broadcasts, the series soon

became very popular.

As might be expected, schools wanted to purchase xylophones, metallophones, and other instruments in the Orff Schulwerk for their own schools. Due to his age, the lack of palisander wood, and the closing of his workshop, Maendler was no longer interested in building Orff instruments. However Klaus Becker, one of Maendler's former employees, was willing to build new instruments with the materials available. Creating xylophone bars out of birch, pine, elm, walnut, and sycamore, Becker was able to provide the instruments students and teachers requested. His experiments led to the development of his own workshop known as *Studio 49*. In addition to improving on Maendler's initial designs, Becker created new instruments including drums, large wood blocks, and a children's string instrument known as a Bordun. To this day, *Studio 49* remains a primary source for quality Orff instruments.

The broadcasts succeeded in opening children's creative energy. Some children sent in simple, crude melodies, while others created more sophisticated pieces for ensembles. In addition to providing a venue for improvisation and composition, Orff provided a venue for performing set compositions. In the first year, Schambeck commissioned Orff to create a Christmas play. Orff wrote the text, Keetman composed the music, and Karl List (a former Güntherschule student) served as the director. The play was immediately popular and was performed in numerous schools and churches throughout Europe.

In 1950, Schott published Orff's music for the broadcasts in five volumes known as *Music for Children*. The volumes progress from pieces suitable for beginners to compositions in the later volumes that are written for advanced students of older ages.

Collaboration with the Mozarteum

While the broadcasts and publications were instrumental in expanding Orff's educational ideas to wider geographical regions throughout Europe, collaboration at the Mozarteum, a music conservatory in Salzburg, served to extend the pedagogy throughout the world. In 1949, Preussner invited Keetman to teach Orff Schulwerk classes to children at the Mozarteum. Working in tandem with Traude Schrattenecker, a former Güntherschule student who owned a dance studio in Salzburg, Keetman was able to introduce movement education to young students, otherwise impossible in the broadcasts.

Crucial to the expansion of the Orff Schulwerk worldwide, the Mozarteum served as the site for an international conference for music school directors in 1953. After observing Keetman's demonstrations with children of various ages, Arnold Walter, Director of the Royal Conservatory of Music in Toronto, and Naohiro Fukui, Director of the Musashino Music Academy in Tokyo, introduced ideas of elemental music to their own countries. At Walter's suggestion, Doreen Hall journeyed from Canada to study with Keetman for a year in Salzburg. Upon returning to Canada, Hall was one of the instrumental figures in Orff Schulwerk education in her country. Teacher training courses at the Mozarteum helped to foster further international interest in Orff Schulwerk.

Growing international interest led to the development of the Orff-Schulwerk Information Center and Seminar, originating in a few rooms at the Mozarteum. Teacher training courses began in 1961 with a curriculum including four semesters of study. Keetman and Orff served as directors, while other teachers included Lotte Flach, Barbara

Haselbach, Traude Schrattenecker, Franz Tenta, and Rudolf Schingerlin. In time, Wilhelm Keller replaced Orff in his position as director. Due to limited space, supporters began to plan the construction of the Orff Institute. Created as a Quadrivium by the Austrian Ministry of Education and the town and region of Salzburg, the Institute opened on October 25, 1963, with Hermann Regner serving as its director. Currently, the Orff Institute provides studies for undergraduate, graduate, and post-graduate students as well as summer courses. Orff Schulwerk has spread internationally to include organizations in the following countries: Australia, Austria, Belgium, Canada, Czech Republic, Estonia, Finland, France, Germany, Great Britain, Greece, Italy, Japan, The Netherlands, New Zealand, People's Republic of China, Poland, Portugal, Russia, Slovenia, South Africa, South Korea, Spain, Switzerland, Taiwan, and the United States.

Pedagogy

For individuals interested in the Orff Schulwerk process today, a variety of books are available providing appropriate curricular materials with detailed sequencing instructions for introducing lessons to children. Keetman's *Elementaria: First Acquaintance with Orff-Schulwerk* (1970) provides an excellent foundation for understanding how rhythm, melody, and movement can be used in elementary music classrooms. Her text is filled with numerous musical examples to help teachers facilitate the learning process in a logical, sequential manner. Another notable source includes Warner's *Orff-Schulwerk: Applications for the Classroom* (1991), which seeks to provide pedagogical explanations that underlie the Schulwerk philosophy in the Orff-Keetman

volumes. Frazee's *Discovering Orff: A Curriculum for Music Teachers* (1987) provides a curricular model for Grades 1-5 with clearly identifiable goals for literacy. Likewise, Saliba's *Accent on Orff: An Introductory Approach* (1991) provides excellent curricular materials along with information regarding successful sequencing.

While the books listed above provide excellent resources for materials and instructions regarding sequencing, they do not address the very real problems teachers face when even the most carefully conceived lesson plans fail to produce success. Even the simplest of tasks may require teacher intervention after the initial presentation of material. In contrast to most pedagogical books detailing the Orff Schulwerk process, Steen's *Exploring Orff: A Teacher's Guide* (1992) includes a section addressing student achievement. When students fail to meet teachers' objectives, Steen proposes the following eight questions for teachers to ask themselves:

1. Did I pack too many activities into the time available? Was the lesson cluttered with too many things?

2. Did the students have the skills to do what was required? Did they have the knowledge or background to understand the objective as presented by the lesson?

3. Were the instructions clear in stating each task? (Sometimes I don't anticipate questions that arise and divert the focus of the lesson.)

4. Were the steps small enough to assure that at least 80% of the class could stay with the pace of instruction? Was the pace too fast, or too slow?

5. Did I dictate the lesson through imitation activities or did I share the development with students?

6. Was the objective clear to the students in the first place? How were they to know that they had achieved the goal?

7. Was it the right task on the wrong day?

These questions provide useful contemplation regarding the interactive role between teachers and students during the learning process. Future empirical research may help to clarify these interactions in ways that may provide useful information regarding teaching effectiveness.

Research

The pervasive use of the Orff Schulwerk process has spurred research from a variety of perspectives. In addition to historical (Orrell, 1995; Osterby, 1988; Stone, 1971; Weisert-Peatow, 2002; Wimmer, 1993), and philosophical (Malitowski, 2001; Snell, 1980) studies, the Orff approach has been examined in light of its curricular role in the classroom (Addo, 1990; Caton, 1982; Chang, 1991; Chenault, 1993; Chin, 1993; Clausel, 1998; Connor, 1986; Daigneault, 1993; Harrington, 1972; Hensley, 1981; Herlihy, 1979; Hunt, 1983; Jaccard, 1995; Lyne, 1991; Martin, 1992; Medford, 2003; Price & Hardin, 1990; Prytuluk, 2000; Rastall, 1989; Smith 1977; Woskowiak, 1973; Wunderlich, 1980;) and in comparison with other pedagogies such as Kodaly, Jacques-Dalcroze, and traditional song-based approaches (Ardrey, 1999; Bebeau, 1982; Bondurant-Koehler, 1995; Boras, 13988; Eterman, 1990; Forsythe, 1984; Hedden, 1990;

Hensley, 1981; Hudgens, 1987; Jessen, 1995; Madden, 1984; Mathey-Engelbrect, 1990; McKoy, 1998; Moore, 1984; Muse, 1994; Olsen, 1964; Siemens, 1969; Stone, 1971; Tsisserev, 1993).

Composition and improvisation in the Orff Schulwerk curriculum have also been topics of special interest to many researchers. Research in these areas has focused on both teacher behaviors (Beegle, 2001; Munsen, 1986) and student outcomes (Amchin, 1995; Auh, 1995; Brophy, 1998; Hamilton, 1999; Levi, 1991).

Not surprisingly, Orff's frequent implementation of pentatonic scales provides a natural venue for multicultural awareness. Several studies have investigated multicultural aspects of the Orff approach focusing on the music of Ghana (Addo, 1990; Kubitsky, 1998; McKoy, 1998), Asian cultures (Chin, 1993; Shamrock, 1988), primal aboriginal cultures (Cripps, 1990), and ethnic subcultures of America (Joslin, 1990).

Researchers have also investigated the Orff process as used by a variety of professionals to achieve nonmusical goals. A number of researchers have examined the impact of Orff Schulwerk learning on achievement in nonmusical subjects such as reading, (Kelley, 1981; Lu, 1986; Richardson, 1979), mathematics (Whitehead, 2001), spatial ability (Taetle, 1999) and memory development (Grant, 1991). Research in music therapy has documented the incorporation of the Orff Schulwerk process to help individuals meet social, psychological, and physical needs (Adelman, 1979; Hochheimer, 1976; Taylor, 1984). Individuals working with clients who have learning disabilities have found the Orff process useful in auditory training (Harris, 1978) and in raising the self-esteem of their clients (Barker, 1981). In addition, the Orff process has proven

successful in work with individuals with mental retardation (Bitcon & Ball, 1974; Ponath & Bitcon, 1972) and autism (Hollander & Juhrs, 1974).

Research and the American Orff-Schulwerk Association

The American Orff-Schulwerk Association (AOSA) has actively encouraged research since the late 1960s. In 1989, AOSA sponsored a panel discussion regarding the role of music education research and its relevance to Orff Schulwerk. Participants included Sue Snyder, Sylvia Munson, Phyllis Weikart, Paul Lehman, Robert Cutietta, Robert Ashe, Kenneth Kostska, Steven Hedden, Robert Facko, Ed Tower, James Connell, Michael Williams, and Mel Kozek. Key questions addressed by the panel were as follows:

1. Why do researchers seem reluctant (or are unable) to study the questions whose answers are most urgently needed by teachers?

2. What type of research is needed to elevate the importance of music education in the schools?

3. What should be the role of AOSA in music education research? What difference does the Orff approach make in music achievement?

4. Do we need a long-range study to document proof of the effect of Orff Schulwerk education on students as performers, creators, listeners or critics?

Answers to these questions were varied with an acute awareness that public school administrators are often more concerned with academic progress in mathematics, science, and language arts than they are in music education. Participants also acknowledged that

the gap between researchers and teachers in the field needed to be eliminated so that they could benefit from each other's knowledge and expertise (Bohlmeyer, 1989).

A year later, the Research and Grants Committees of AOSA proposed eight questions for future research:

1. What is Orff Schulwerk?

2. How can the outcomes of Orff Schulwerk training be measured?

3. What impact does Orff Schulwerk have on music learning and achievement?

4. That [*sic*] existing research is adaptable from other fields?

5. What impact does Orff Schulwerk have on learning and human development?

6. What impact does Orff Schulwerk have on language development and other

   a. curriculum areas?

7. What classroom strategies work to accomplish goals?

8. What public relations vehicles are appropriate and/or effective in promoting Orff Schulwerk? (Snyder, 1990)

Summary

Worldwide, the Orff Schulwerk pedagogy is one of the most popular methods used in elementary music instruction. Through a multitude of activities including instrument playing, singing, and movement, the Schulwerk engages students in elemental music making based on natural rhythms found in speech and movement.

Researchers and pedagogues have examined the Orff Schulwerk pedagogy from a variety of perspectives resulting in historical, curricular, compositional, multicultural, and

therapeutic studies; however, nothing exists that describes how teachers affect positive change in student performance beyond the initial stages of note learning.

Research in other disciplines of music education such as bands, choirs, orchestras, and private instruction has examined teaching effectiveness using a variety of dependent measures. As Duke (1999/2000) discusses in a content analysis examining instructional measures of teaching effectiveness, few of these studies use student achievement as a dependent measure. Yet, researchers have uncovered useful information regarding how people perceive teaching effectiveness and methods of helping teachers modify their own instructional behaviors. The section below provides a review of this literature.

Teaching Effectiveness: Research in Music Education

Scholars have investigated teaching effectiveness in a variety of instructional settings including choirs, bands, orchestras, general music classrooms, private instruction, and music therapy. Indeed, the key to teaching effectiveness is not found within a particular methodology. Excellent teaching can be observed among pedagogues ascribing to any number of varying pedagogies including Orff, Kodaly, Dalcroze, and others. Teaching for student improvement, the essence of good teaching, transcends methodology. Therefore, the purpose of this review is to explore extant research regarding effective teaching within a variety of music instructional settings, irrespective of particular methodologies. Findings below are reported in the following ten categories: (1) evaluations and perceptions of teaching effectiveness, (2) teacher intensity, (3)

student attitudes, (4) student attentiveness, (5) use of time, (6) pacing, (7) sequential patterns, (8) directives, (9) modeling, and (10) feedback.

Evaluations and Perceptions of Teaching Effectiveness

People draw from a variety of sources throughout their lives to develop a philosophy of effective teaching (Schmidt, 1998). Perceptions can be affected by several variables including observational focus, age, training, musical experience, and teaching experience.

Perhaps due to the large number of variables inherent in music instruction, people often tend to focus their attention on the teacher, rather than the student. In a meta-analysis examining measures of instructional effectiveness in music education research, Duke (1999/2000) found that out of 86 articles reviewed, only 13 measured teaching effectiveness using student achievement as a dependent variable. Examining natural observational tendencies, Henninger (2002) found that when preservice teachers were asked to write comments regarding taped teaching episodes of 11 band directors and 2 applied teachers, approximately 80% of the commentary pertained to teachers, while only 14% pertained to students. Duke and Prickett (1987) examined the effects of observational focus in a study involving undergraduate nonmusic majors. Divided into three different groups, subjects viewed a videotaped excerpt from a private violin lesson under three different conditions, respectively. While all subjects heard the complete audio excerpt, one group could only see the teacher, another group could only see the student, and the third group saw both the student and teacher together. After observation,

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subjects were instructed to complete a music teaching evaluation form using a 10-point rating scale and to estimate the number of teacher approvals and disapprovals. Measures of teacher and student attitudes on the music teaching evaluation form revealed that attitude scores were lowest for the individual under observation. Estimations of feedback showed that subjects who observed the teacher alone estimated a greater number of disapprovals than those who viewed the student alone or both teacher and student.

Using the same tape for another study, Prickett and Duke (1992) asked undergraduate music and nonmusic students to write succinct comments while viewing both the teacher and the student. Randomly divided into three groups, all subjects were asked to write down their observations. In addition, the second and third groups were asked to record approvals and disapprovals, respectively. After viewing the tape and recording observations, subjects estimated amounts of feedback and completed the same teaching evaluation form used in the study mentioned above. Results showed that subjects who recorded approvals estimated significantly higher levels of positive feedback than subjects in other groups. Interestingly, individuals who recorded disapprovals did not report significantly higher negative feedback rates than other observer groups.

While the studies cited above experimentally controlled subjects' observations, age may be a naturally occurring variable that affects observational measures of teaching effectiveness. In a study examining teacher evaluation by experienced teachers and students in middle school, high school, and college, Madsen (2003) found that age affected observational focus. Subjects in each group viewed a videotape with eight

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teaching episodes illustrating varying combinations of accurate and inaccurate instruction, high and low teacher delivery, and on- and off-task student behavior. Although all groups focused on teacher delivery more than any other variable, older subjects concentrated more on accuracy of instruction, while younger subjects (especially middle school students) concerned themselves with classroom management skills. Interestingly, middle school and high school students were likely to give high ratings to teachers regardless of instructional content as long as they exhibited high teacher delivery and kept their students on-task.

Observational focus not only affects the way that individuals perceive teaching effectiveness in others; it also affects the way people perceive their own teaching skills. Preservice and student teachers have a tendency to evaluate themselves higher than their instructors (Cassidy, 1993; Greenfield, 1978; Madsen, Standley, & Cassidy, 1989; Madsen, Standley, Byo, & Cassidy, 1992), collegiate colleagues (Byo, 1990), or independent observers (Colwell, 1995). However, when aspiring teachers are coached to examine specific aspects of their teaching, their self-evaluations may more accurately reflect others' evaluations. Verrastro (1975) tested two methods of improving student teachers' verbalizations during their internship. In conferences with their supervisor, a control group analyzed lessons for purpose, development, and learning outcomes; whereas, an experimental group pinpointed cause and effect relationships in their verbalizations. Final results indicated that although interns in the experimental group successfully increased scores related to verbalizations during the semester, they rated themselves lower than their supervising teachers. Conversely, students in the control

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group achieved progressively lower scores related to verbalization throughout the semester, yet consistently gave themselves higher scores than their supervising teachers.

Similarly, when teachers know the criteria by which they will be judged, they are able to direct their attention to master the required objectives. Moore (1976) tested this theory in a study with four groups of elementary education majors who were evaluated for teaching effectiveness during peer teaching lessons using a form that measured teacher interactions, musicianship, and creativity. The first group was allowed access to the evaluation form before teaching began, instructed to alter their instruction based on the listed criteria, and required to complete the form for purposes of self-evaluation. The other three groups received varying combinations of feedback from videotapes and the instructor but were not allowed to see the evaluation form or use it for self-analysis. Results indicated that students given access to the evaluation criteria achieved higher scores for teaching effectiveness and demonstrated more positive attitudes toward the course than any other group.

Not surprisingly, training in behavioral observation can affect aspects of observational focus and subsequent teacher evaluation. In a study comparing trained and untrained subjects' evaluations of two 13-minute videotaped teaching excerpts, Madsen and Duke (1985a) found that individuals who received training were more accurate in their list of teacher responses and valued approval more than untrained subjects. Examining the effects of training on measures of music teaching evaluation, Duke (1987) found that subjects trained in behavioral observation estimated higher proportions of Teacher Talk and lower proportions of Student Talk than untrained subjects. No

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differences were found between groups in estimates of Student Performance, Teacher Performance, Approval, Disapproval, Instructions, or Performance Demonstration. However, both groups greatly overestimated amounts of teacher disapproval and underestimated teacher approval. Duke also reported that regardless of training, most individuals focused on the teacher rather than the student and that there was wide variability in student responses within groups.

In a study investigating the reliability of observed variables related to teaching effectiveness among untrained subjects, Schmidt (1992) found that items related to teacher rapport were most reliably identified. These items included demonstrations of patience and understanding, a teacher's genuine interest in the student, suitability of music selection to student ability, clarity of verbal explanations, ability to break down a task, and accurate perception of student ability. Related to teacher rapport, Madsen, Standley, and Cassidy (1989) reported that untrained subjects were equally able to identify measures of teacher intensity as individuals who had received training.

In addition to training in behavioral observation, an individual's musical background can affect evaluations of teaching effectiveness, with musicians consistently rating music teachers lower than nonmusicians (Duke & Blackman, 1991; Prickett & Duke, 1992; Yarbrough, Price, & Hendel, 1994). Although Pricket and Duke (1992) found that overall scores for an applied violin teacher's instruction did not differ between music majors and nonmusic majors, the former group issued significantly lower ratings than the latter group for specific measures of the teacher's musicianship, reinforcement effectiveness, and overall effectiveness of the lesson. Although both music majors and

nonmajors recorded the same number of disapprovals, the former group recorded more approvals than the latter group.

While musical experience may effect evaluations of teaching effectiveness, so may one's teaching experience. In a study in which experienced teachers and university students were asked to evaluate a tape of a high school choral teacher, experienced teachers issued higher ratings than university students (Yarbrough, Price, & Hendel, 1994). Investigating differences in perceptions of teaching effectiveness before and after teaching experiences, Butler (2001) found that prior to initial teaching experiences, pre-service teachers equated good teaching with aspects of persona associated with role, personality, and image. Qualitative data revealed that after two teaching experiences, with peers and children, respectively, pre-service teachers became more interested in instructional strategies.

Although instructional strategy may be more crucial than personality in measures of affecting positive change in student performance, many people recognize that rapport between teachers and students is an important variable that should not be ignored. For this reason, researchers have examined the effects of teacher delivery, associated with a multitude of attributes including facial expression, eye contact, vocal inflection, and accuracy of instruction. These and other variables associated with teacher affect are often referred to as teacher intensity.

Teacher Intensity

Not surprisingly, high ratings of teacher intensity have been associated with systematic observation of fast pacing and rapid rates of speech (Single, 1990). Likewise, Van Weelden (2002) found that observers' perceptions of conductors' posture and facial expression affected their ratings of teaching effectiveness. These and other aspects of teacher intensity may affect individuals' ratings of teacher effectiveness across various age groups. As mentioned earlier, Madsen (2003) discovered that middle school students appear to be more interested in a teacher's ability to deliver instruction with high affect than content accuracy. Similarly, in a study pairing teacher delivery skills with varying levels of content accuracy, Hamann, Baker, McAllister, and Bauer (2000) discovered that university music students valued delivery more than content accuracy when rating teaching effectiveness. In a study reporting experienced band directors' ratings of student teachers, Madsen, Standley, Byo, and Cassidy (1992) found that interns receiving the highest ratings were those who identified high levels of overall teacher intensity within their own instruction. Similarly, Madsen and Geringer (1989) found that professional music educators assigned higher ratings for teaching effectiveness to student teachers who displayed high intensity behaviors than to those who displayed low intensity behaviors.

Research indicates that individuals varying in age, education, and musical experience can reliably identify overall levels of teacher intensity without difficulty (Byo, 1990; Madsen, Standley, & Cassidy, 1989; Madsen, Standley, Byo, & Cassidy, 1992). However, as in other areas of teaching instruction, students often rate themselves

higher in measures of teacher intensity than their instructors (Cassidy, 1993; Colwell, 1995), experienced teachers, and expert teachers (Madsen, Standley, Byo, & Cassidy, 1992). Although instruction seems to be ineffective in helping students improve levels of teacher intensity (Cassidy, 1990; Colwell, 1995), individuals often improve naturally with practice (Butler, 2001; Cassidy, 1990; Colwell, 1995). Therefore, it is imperative that preservice teachers have frequent opportunities to practice teaching groups of people, including children and peers.

Studies examining the effects of teacher intensity behaviors in the classroom show that high levels of teacher intensity can affect student attentiveness. In studies comparing high and low intensity behaviors, high intensity teaching was associated with greater on-task behavior among pre-school children (Sims, 1986), and students in high school music ensembles (Yarbrough & Price, 1981). In contrast, Yarbrough (1975) found that varying levels of teacher intensity had no significant effects on high school and college students' attentiveness, achievement, or attitude toward rehearsal. However, treatment in this study was limited to three 16-minute sessions; thus, results should be viewed with caution. Further research with more extended treatment may confirm or contradict these findings.

Interestingly, Yarbrough (1975) was the only researcher investigating teacher intensity who examined student attitudes toward instruction as a dependent variable. Yet, researchers have examined a number of other independent variables related to student attitude that deserve mention.

Student Attitudes Toward Music Instruction

Several variables thought to influence student attitude toward music instruction actually had little or no effect. For instance, comparing student attitudes in classes taught by pre-service, student, and experienced teachers, Wagner and Strul (1979) failed to find significant differences based on teachers' experience alone. As mentioned earlier, in a study with limited treatment, Yarbrough (1975) found that differing levels of teacher intensity failed to effect high school and college choral students' attitudes toward rehearsal. Questioning the effects of differing rehearsal structures on high school choral students' attitudes, Cox (1989) discovered that although rehearsal formats produced significant differences in student attitudes toward choral rehearsals, the effect sizes were too small to be practically meaningful.

Although the variables mentioned above have little to no effect on student attitude toward music instruction, teacher feedback is one of the most important components affecting this dependent measure. When students receive feedback, they report positive attitudes toward rehearsals (Dunn, 1997; Price, 1983) and their teachers (Price, 1983).

Comparisons regarding the effects of approval and disapproval on student attitude have yielded varying results. Kuhn (1975) found that neither high teacher approval nor disapproval resulted in significant attitude differences among fifth-grade students toward audiotaped general music instruction. Yet, in a secondary rehearsal setting, Murray (1975) discovered that high school choral students' attitudes toward rehearsal and the music being learned were significantly more positive under conditions of high teacher approval. Interestingly, neither of these studies examined students' feelings of

accomplishment. Including measures of student self-efficacy, Duke and Henninger

(1998) compared the effects of negative feedback to instruction with directives on student

attitudes among fifth- and sixth-graders and adults when learning to play the recorder.

They found that student attitudes remained high even when instructions were given in the

form of negative feedback. Importantly, teachers did not withhold positive feedback after

successful trials, and students reported feeling successful under both experimental

conditions. Thus, negative feedback may have been perceived as helpful rather than

discouraging.

Attentiveness

One may assume that students with positive attitudes toward music instruction are

attentive in class. Yet, research has demonstrated that student attentiveness is dependent

on a variety of contributing variables. Comparing student attentiveness in elementary

music classes and regular classrooms across one academic year, Forsythe (1975) found

that elementary students were significantly more attentive in music classes, regardless of

reinforcement rates or errors. The author speculated that music may have served as a

reinforcing activity that held children's attention. Similarly, Madsen and Alley (1979)

reported that among secondary ensemble students, music appeared to be a reinforcing

activity for many students, in spite of high levels of disapproval. If music does serve as a

reinforcer, it is not surprising that in studies of music classes, students were most

attentive during periods of active music making (Brendell, 1996; Dunn, 1997; Forsythe,

1977; Kostka, 1984; Madsen & Geringer, 1983; Price, 1983; Spradling, 1985; Witt, 1986;

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Yarbrough & Price, 1981) and least attentive during transitional periods between activities, teacher instruction, and class discussion (Brendell, 1996; Forsythe, 1977; Kostka, 1984; Madsen & Geringer, 1983; Moore, 1987). Thus, succinct verbalizations that allow students to spend time making music appear to be most effective in helping maintain students' attention.

Investigating the effects of teacher reinforcement on student attentiveness, Price (1983) found that in controlled conditions where teacher instruction varied according to directives and feedback, university band students were most attentive when receiving feedback. In contrast, Dunn (1997) reported that although high school choral students achieved higher performance and attitude ratings when receiving feedback during rehearsal, they were actually more attentive in rehearsals lacking feedback.

Studies of elementary music classrooms have shown that high approval generates more attention than high disapproval (Forsythe, 1975; Kuhn, 1975). However, Forsythe (1975) reported that reinforcement errors resulted in increased off-task behavior within elementary music classrooms; therefore, approval must be contingent on student behavior. As mentioned above, Madsen and Alley (1979) found that high rates of disapproval in band and choral rehearsals did not affect student attentiveness, possibly indicating that music is itself a positive reinforcer. Similarly, Murray (1975) found that high rates of disapproval did not affect student attentiveness in high school choral rehearsals.

Another factor that may affect student attentiveness is the teacher's delivery skills, often referred to as teacher intensity or magnitude. Sims (1986) discovered that

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high levels of eye contact and facial expressions of enthusiasm generated higher attentiveness among pre-school subjects during listening activities. Similarly, Yarbrough and Price (1981) found a strong relationship between teacher eye contact and student attentiveness in secondary instrumental and choral ensemble rehearsals. In contrast, Yarbrough (1975) failed to find statistically significant differences in attentiveness due to teacher intensity in high school and college choral rehearsals. Failure to find differences may have been due to novelty effects associated with experimentation.

Attentiveness, student attitudes, and perceptions of teaching effectiveness are, of course, all affected in some part by what goes on in the classroom. In the interest of documenting how much time teachers and students engage in various behaviors, several research studies have focused on the temporal aspects of classroom instruction.

Time Studies

Many studies have investigated the ways in which music teachers use their time in the classroom. Mean results across several studies indicate that, on average, music teachers across grade levels spend approximately 44% of class time talking (Blocher, Greenwood, & Shellahamer, 1997; Caldwell, 1980; Cavitt, 1998; Colprit, 2000; Cox, 1986; Darrow, Johnson, Ghetti, & Achey, 2001; Derby, 2001; Duke, 1987; Forsythe, 1977; Goolsby, 1996, 1999; Kostka, 1984; Moore, 1981,1987; Moore & Bonney, 1987; Orman, 2002; Pontious, 1982; Sang, 1987; Wagner & Strul, 1979; Wang & Sogin, 1997; Watkins, 1986; Witt, 1986; Yarbrough & Price, 1989; Younger, 1998). Goolsby (1996, 1999) reported that experienced band directors often spend less time talking than pre-

service and novice teachers (Goolsby, 1996, 1999); however, Wagner and Strul (1979) reported that in a study of 18 elementary teachers with varying levels of experience, student teachers actually verbalized less than experienced teachers. In a study examining the rehearsal process of beginning and advanced choirs in two successful high school choral programs, Davis (1998) found that the amount of teacher verbalization correlated to student success varied between directors. While one teacher increased commentary as students improved, another decreased verbalizations.

Mean results across studies indicates that students across grade levels spend about 43% of class time actively engaged in musical activities (Cavitt, 1998; Colprit, 2000; Cox, 1986; Derby, 2001; Duke, 1987; Forsythe, 1977; Goolsby, 1996, 1999; Kostka, 1984; Moore, 1981, 1987; Moore & Bonney, 1987; Orman, 2002; Sang, 1987; Single, 1990; Wagner & Strul, 1979; Wang & Sogin, 1997; Yarbrough & Price, 1989). Reports of teacher modeling vary according to researchers' definitions. Those who document teacher modeling alone usually report relatively small percentages of time dedicated to this activity. For instance, Kostka (1984) found that piano teachers spent less than 5% of lesson time playing for their students. Similarly, Derby (2001) reported that expert choral teachers spent about 6% of instructional time modeling alone and 3% of class time performing with their students. Although Cavitt (1998) did not explicitly define modeling as an activity that occured apart from student performance, she reported that expert band directors spent about 6% of their time modeling for their students. In stark contrast to these relatively small percentages, Wang and Sogin (1997) reported that among 19 elementary music teachers observed, 31% of class time was spent modeling

alone. Given the rote learning process that often takes place in elementary classrooms, these results may not be considered surprising. Yet, in another study documenting use of teacher time in elementary classrooms, Orman (2002) found that teachers spent about 11% of their time performing alone for their students and 11% of their time performing with their students. Researchers who document teacher performance as a combined result of playing alone and with their students report higher percentages of time. Colprit (2000) and Duke (1987) found that in applied Suzuki violin lessons and a bassoon lesson, respectively, teacher performance consumed roughly 20% of instructional time. Similarly, Sang (1987) reported teacher performance with first year instrumental students at 26%.

While percentage reports of time use in the classroom have provided a global picture of instructional efficiency, data regarding specific behaviors has helped educators understand the impact of particular actions. Researchers who have examined rates of behaviors and the interaction between teachers and students have provided useful information regarding pacing during music instruction.

Pacing

Pacing may affect student attitudes toward the music they are learning. Reporting student attitudes toward experimental music in university band rehearsals, Spradling (1985) found that attitude scores were higher when teachers limited their talking to 15 seconds between trials rather than 30 or 45 seconds.

More importantly, pacing appears to be a key variable in student achievement. Studies examining piano teachers (Siebenaler, 1997) choir directors (Derby, 2001), and band directors (Cavitt, 1998) found that effective teachers exhibited periods of high paced teaching characterized by frequent, efficient interaction between teacher verbalizations and student performance. Likewise, Hendel (1995) described good elementary music teachers as individuals with high levels of teacher magnitude who rapidly altered their pace of instruction and used patterns of instruction that are simple, concise, sequential, and complete. Teacher magnitude, as related to personality, may be a contributing variable to a teacher's natural use of pacing. Investigating psychological factors that may play a role in pacing, Schmidt (1989) found evidence suggesting that pacing is related to personality variables associated with Intuition and an interaction between Extroversion and Judging, as measured by the Myers-Briggs Type Indicator (MBTI) based on Jung's theories of personality.

Although most people understand pacing intuitively, Single (1990) sought to observe teacher pace objectively and to compare her findings with subjective ratings and descriptions issued by experienced teachers. In order to obtain objective evidence of pacing differences among four high school and four middle school band directors, Single had three trained observers use a stopwatch to measure frequency and duration of rehearsal activities, length of occurrences, activities per minute, and rates of speech. Subjective information was gathered from 11 instrumental teachers enrolled in a graduate class. Each teacher rated the band directors for qualities of teacher intensity, pacing, and rate of speech using a 5-point Likert-type scale. Pearson product-moment correlation

coefficients indicated that perceptions of good pacing were correlated with perceptions of teacher intensity ($r = .93$) and rate of speech ($r = .80$). In order to examine ideas about pacing, she asked each graduate student to define the term in their own words. Results indicated that 54% mentioned rate of instruction, while 18% mentioned rate of speech. A majority of subjects believed that good pacing included more focus on student performance time than on teacher instruction. When comparing objective analyses of rehearsal behaviors with subjective ratings of teacher pacing, no statistically significant correlations were found.

In another study comparing objective and subjective analyses of pacing, Duke, Prickett, and Jellison (1998) instructed pre-service teachers to view eight short excerpts from teaching episodes of four novice teachers (one band director, one choral director, and two elementary music teachers). Each participant assigned subjective ratings of pacing based on the following six semantic scales: fast-slow; appropriate-inappropriate; tense-relaxed; smooth-uneven; too fast-too flow; and good-bad. The researchers obtained objective data regarding the rate of instruction using *SCRIBE*, a computer program capable of quantifying frequency, rates, and durations of behaviors. Results indicated that pre-service subjects rated teachers highest when teacher and student behaviors were higher, rather than lower, and when durations of activity were shorter, rather than longer. More specifically, higher paced teaching was characterized by high rates of directives and feedback than information statements and questions.

While research regarding pacing has provided pertinent information regarding the rate of interaction between teachers and students, research regarding the sequence of instruction has examined specific components within teaching episodes.

Sequential Patterns

Researchers interested in how music educators structure their teaching have borrowed from models of direct instruction in nonmusic educational settings (Becker, Engelmann, & Thomas, 1971) to examine sequential patterns in music instruction. Sequential patterns are teaching episodes consisting of three steps: (1) teacher presentation of material, (2) student response, and (3) teacher feedback. The first step, teacher presentation, has been explored in terms of academic task presentations in which students are asked to perform specific tasks versus directions in which students are merely told where to begin in the music. The second step, student response, has been studied by timing the ratio of teacher presentation to student response. The third step, feedback, has been investigated to determine teachers' specificity and accuracy. Additionally, researchers have examined teachers' use of complete patterns, incorporating all three steps, and incomplete patterns, in which feedback is omitted.

Comparing complete and incomplete patterns in university band rehearsals, Price (1983) found that complete sequential patterns resulted in higher student achievement gains, and more positive attitudes toward the rehearsal and the teacher. Research on teacher presentation indicates that regardless of their musical experience, observers consistently rate patterns beginning with academic task presentations higher than those

beginning with mere directions regarding where to start playing (Price, 1983; Price & Yarbrough, 1993/1994; Yarbrough & Hendel, 1993). Findings regarding teacher feedback indicate that observers rate patterns ending with approval higher than those ending in disapproval or no feedback (Yarbrough & Hendel, 1993; Yarbrough, Price, & Hendel, 1994). However, presuming that teacher approvals in these studies were contingent on student success, one may question whether ratings reflect subjects' responses to superior student performance or teachers' comments, per se. Further research controlling for these variables may further illuminate current understanding of positive and negative feedback.

The prevalence of complete sequential patterns in teachers' instruction varies. In a study of private piano teachers, Speer (1994) found low occurrences of complete patterns. However, in a study comparing freshman music majors untrained in sequential patterns, sophomore majors trained in sequential patterns, and experienced teachers, the freshman completed more sequential patterns than the other two groups (Yarbrough & Price, 1989).

Attempts to help teachers improve their sequential pattern skills have produced conflicting results. Yarbrough, Price, and Bowers (1991) reported that experienced teachers enrolled in a two-week summer course in rehearsal techniques increased their use of complete sequential patterns through of combination of class instruction, systematic observation of training tapes, and peer teaching practice. However, class instruction and peer teaching failed to achieve similar results with less experienced, pre-service teachers (Bowers, 1997; Jellison & Wolfe, 1997). Among musicians, videotape

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self-analysis has proven effective in improving efficiency during teacher task presentation (Arnold, 1991, 1995; Benson, 1989; Bowers, 1997) and increasing frequencies of completed patterns (Price, 1992). In a study of nonmusic education majors, Bowers (1997) found that videotape self-analysis in conjunction with other instruction failed to help students increase their use of completed sequential patterns; however, subjects experienced significant gains in specific feedback, efficiency during teacher presentation, and student response time. Maclin (1993) found that writing task analyses helped nonmusic education majors increase completed sequential patterns when teaching music lessons; however, this assignment did not help improve use of specific feedback.

Directives

Although research regarding sequential patterns has provided some information regarding teacher directives, almost no research has examined this variable alone within music instruction. In a study of teaching effectiveness among elementary music teachers, Froelich (1979) found that highly effective teachers phrased instructions in a manner that discouraged class discussion. Several studies have examined directives in relation to the pace of interaction between teacher verbalizations and student performance. Studies reporting teaching effectiveness among expert band directors, choir directors, elementary teachers, and piano teachers indicate that successful teachers issue succinct, frequent directives alternating with numerous student performance trials (Cavitt, 1998; Derby, 2001; Hendel, 1995; Siebenaler, 1997). Likewise, in a study examining perceptions of

pacing among preservice teachers viewing a videotape of novice teachers, Duke, Prickett, and Jellison (1998) found teachers identified as most effective demonstrated high levels of teacher/student interaction. Although some novice teachers may issue directives succinctly, others may benefit from practice. However, the ability to manage one's verbalizations with efficiency may improve with experience. In a study comparing novice and experienced elementary music teachers, Wagner and Strul (1979) reported that veteran teachers spent less time issuing directives than less experienced educators.

In addition to findings regarding the length of directives, some studies have reported the nature of targets among music educators. Interestingly, targets related to rhythmic performance constitute one of the primary concerns across band directors (Carpenter, 1988; Goolbsy, 1997, 1999; Pontious, 1982), choral directors (Derby, 2001), and piano teachers (Buckner, 1997). Studies of expert teachers have shown that effective instructors do not dwell on note accuracy or tuning individual notes. Instead, they focus on style, intonation related to other notes or ensemble members, balance, and phrasing (Bauer, 1993; Cavitt, 1998; Derby, 2001; Doerksen, 1999; Froelich, 1977; Goolsby, 1999; Pontious, 1982).

Modeling

While teacher directives are an essential component in good teaching, modeling may be even more important in producing student improvement. In a study comparing the effects of modeling and verbal instruction alone, modeling was superior on tests measuring band students' ability to imitate pitch and rhythmic patterns (Dickey, 1991).

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Likewise, testing undergraduate music majors' ability to learn an etude, Rosenthal (1984) found that modeling alone resulted in higher student performance scores than modeling with verbal instruction, verbal instruction alone, and free practice. In a similar study, Rosenthal, Wilson, Evans, and Greenwalt (1988) also found modeling superior to silent practice and singing. In a study investigating the effects of modeling, self-listening, and self-evaluation on junior high band students' ability to learn an etude, Hewitt (2001) reported that modeling helped students improve tone, technique/articulation, rhythmic accuracy, tempo, interpretation, and overall performance. Modeling alone was ineffective in helping students improve melodic accuracy or intonation. However, when used in conjunction with self-evaluation via a checklist, modeling helped students improve melodic accuracy.

Investigating the relative contribution of modeling, aural discrimination skills, and diagnostic/prescriptive skills to teaching effectiveness, Sang (1985) reported that modeling was the greatest contributor to observed variance. In a later study, Sang (1987) reported that teachers with strong modeling skills had students with higher performance skills than teachers with weaker modeling abilities. Likewise, Siebenaler (1997) reported high rates of modeling and feedback among superior piano teachers.

Importantly, a teacher's ability to model effectively may directly determine how students perform. Baker (1980) found that when third- and fourth-grade students were taught to sing songs with inappropriate dynamics and tempi via a model, they not only performed the music accordingly, but they also preferred the incorrect versions of the songs. Likewise, students receiving instruction using appropriately modeled dynamics

and tempi preferred the versions they learned. Thus, regardless of the appropriateness of the model, students may perform and prefer music according to what they have heard.

In a study investigating adult pianists' ability to imitate appropriate and inappropriate models, Woody (1999) found that the degree to which individuals could verbally articulate what they had heard affected their performance. Twenty-four university pianists listened to pre-recorded short excerpts of piano music based on Schubert songs that contained idiomatic and nonidiomatic interpretations. After hearing the excerpts, individuals were asked to verbally describe what they had heard and to reproduce the music on a MIDI keyboard. Results demonstrated that pianists who were most accurate in their verbal descriptions were also most accurate in their performances.

Feedback

Although research regarding directives and modeling is limited, many researchers have investigated the effects of feedback during music instruction. Indeed, feedback plays a crucial role in teacher instruction. Studies comparing feedback and no feedback conditions in rehearsals indicate that feedback results in higher student achievement as well as positive attitudes toward rehearsals and the instructor (Dunn, 1997; Price, 1983). Additionally, teachers who use frequent feedback are rated more positively in terms of pacing (Duke, Prickett, & Jellison, 1998) and teaching effectiveness (Siebenaler, 1997). Fortunately, research indicates that feedback skills can be improved through a variety of means, including traditional instruction via lecture and observation of training tapes (Yarbrough, Price, & Bowers, 1991), training in sequential patterns (Bowers, 1997), or

by videotape self-analysis (Alley, 1980; Arnold, 1991; Benson, 1989; Killian, 1981; Price, 1992).

Studies examining the effects of feedback on attentiveness show that high levels of positive reinforcement result in higher rates of on-task behavior at the elementary level (Forsythe, 1975; Kuhn, 1975; Madsen & Alley, 1979). However, approval error results in higher off-task behaviors among students; therefore, approval must be appropriately contingent in order to affect student attention (Forsythe, 1975). Although approval/disapproval ratios may affect attentiveness among elementary students, high rates of disapproval do not seem to alter attentiveness among secondary students in ensemble rehearsals (Madsen & Alley, 1979; Murray, 1975). Additionally, across grade levels negative feedback is no less effective in measures of student achievement than positive feedback (Duke & Henninger, 1998; Kuhn, 1975; Murray, 1975).

As mentioned earlier, studies investigating students' attitudes toward approval and disapproval indicate conflicting results. Duke and Henninger (1998) compared the effects of instruction via negative feedback to instruction with directives and found that students reported high, positive attitudes under both conditions. Likewise, Kuhn (1975) found that fifth-grade general music students' attitudes toward instruction did not decrease as a result of high levels of negative feedback. In contrast, Murray (1975) found that among high school choral students rehearsing in experimentally controlled conditions, attitudes toward rehearsal and repertoire were highest under an 80% approval condition and lowest in a 20% approval condition. Duke and Henninger (1998) were the only researchers to include measures of student self-efficacy in their attitude scales.

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Future research examining students' perception of success under varying approval conditions might further clarify the results of the other two studies.

Several studies have examined observers' perceptions of teacher feedback. Although individuals who lack training in behavioral observation may view teacher approval as generally good, specific training may increase observers' opinions of teacher approval (Madsen & Duke, 1985a). Yet despite training, observers may underestimate amounts of teacher approval and overestimate disapproval (Duke, 1987). Perceptions can vary depending on observers' focus of attention. At the end of a semester in behavioral techniques, Madsen and Duke (1985b) asked 109 undergraduate and graduate music education and music therapy students to observe a 23-minute videotape of a kindergarten general music class. During this task, students were instructed to write as many succinct comments as possible concerning their observations. Afterwards, students estimated amounts of teacher approvals, disapprovals, and instruction and rated various aspects of approval and disapproval using a 7-point Likert-type scale. Results showed that music education students observed more approval than music therapy students. Written comments revealed that music education students focused more on teachers and students, while music therapy students concerned themselves more with classroom activities. Duke and Prickett (1987) found that focus of attention altered nonmusic majors' perceptions as well. When viewing a videotape of a 9-minute private violin lesson, subjects asked to observe the teacher estimated more disapprovals than individuals asked to observe the student.

Research has also shown that observers rate specific reinforcement higher than general feedback (Price & Yarbrough, 1993/1994; Yarbrough & Hendel, 1993; Yarbrough, Price, & Hendel, 1994) and that they rate teaching episodes ending in approval higher than those ending in disapproval or lacking feedback (Price & Yarbrough, 1993/1994; Schmidt, 1995; Wolfe & Jellison, 1990; Yarbrough & Hendel, 1993; Yarbrough, Price, & Hendel, 1994).   Although findings regarding gender are limited, Schmidt (1995) found that among high school choral students rating an audiotaped private voice lesson, males rated disapproval significantly higher than females and that females rated approval significantly higher than males. Further research might clarify whether observers' perceptions of student achievement might alter ratings of teaching effectiveness.

Studies examining the prevalence of teacher feedback within music instruction indicate that feedback varies among teachers and instructional settings. Variables associated with personality may affect individual differences in feedback within teacher groups. Using the Myers-Briggs Type Indicator based on Jung's theory of personality to investigate differences between applied teachers, Schmidt (1989) found that instructors with qualities of Extroversion, Intuition, and Judging were more likely to give reinforcement than individuals with qualities of Introversion and Sensing. Specifically, teachers with combinations of Extroversion and Judging had the highest means for reinforcement over any other group.

When examining reports of teacher feedback within music instruction, it appears that the type of feedback may vary according to the instructional setting. In studies of

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private lessons among pianists (Buckner, 1997; Siebenaler, 1997) and violinists (Colprit, 2000), teachers gave approval over twice as often as disapproval. In contrast to studies by Buckner (1997) and Siebenaler (1997), Kostka (1984) found equal amounts of approval and disapproval among private piano teachers. In studies of ensemble rehearsals, Derby (2001) and Younger (1998) reported roughly equal amounts of positive and negative feedback within choral and instrumental rehearsals, respectively. In a study of expert band directors, Cavitt (1998) reported negative feedback occurring more than half again as often as positive feedback.

In addition to instructional settings, student age may affect teachers' use of feedback. Madsen and Duke (1985a) investigated undergraduate observers' attitudes toward feedback in elementary and high school settings, and found that observers demonstrated more positive attitudes toward teacher praise with younger children than with teenagers. Studies investigating teacher behaviors during elementary music instruction show that instructors are often generous with academic praise (Hendel, 1995, Kostka, 1984; Moore, 1981; Moore & Bonney, 1987; Wagner & Strul, 1979; Wang & Sogin, 1997; Yarbrough & Price, 1989) and that disapproval usually focuses on social, rather than academic behavior (Hendel, 1995; Moore, 1981; Moore & Bonney, 1987; Wagner & Strul, 1979). Wagner and Strul (1979) reported that elementary teachers often made social approval mistakes, praising students for behaviors that were nonexistent or in opposition to what they should be doing in class. Some reports indicate that as students mature, music teachers are less approving. Carpenter (1988) found that junior high band directors focused more on social behaviors and were more approving than high school

directors. He also noted that high school directors' disapprovals were usually academic in nature. Likewise, in a small study comparing a high school choral conductor to a university choral conductor, Cox (1986) reported higher rates of approval in high school rehearsals. In a study of expert choral directors at the elementary, middle and high school levels, Derby (2001) found that elementary directors delivered more positive feedback than secondary directors; however, they also delivered more negative feedback. Thus, elementary teachers issued more feedback overall than secondary teachers. In a study of expert middle and high school band directors, Cavitt (1998) also reported higher rates of disapproval than approval, but did not find differences according to age.

Summary

Perceptions of teaching effectiveness are affected by numerous variables including age, observational training, teaching experience, and musical background. Therefore, individuals interested in examining and improving their teaching skills should base their judgments on objective research, rather than subjective assessments from students, colleagues, and friends. Although individuals respond positively to educators who exhibit high levels of teacher intensity, student improvement is contingent upon behaviors much more extensive than rapport and enthusiasm.

In short, research shows that teachers perceived to be most successful (1) maintain a high pace of instruction, characterized by frequent, short episodes alternating between teacher talk and student performance, (2) are proficient musicians capable of providing excellent musical models for their students, thereby avoiding unnecessary

verbalizations when appropriate, and (3) use specific, contingent feedback aimed at helping students improve performance.

Some of the studies reviewed demonstrate that expert music teachers do indeed demonstrate these characteristics. Yet, few studies have examined teaching effectiveness using student achievement as a dependent measure. Most have depended upon observers' perceptions of teaching effectiveness without regard to student performance. The purpose of this study was to examine teacher effectiveness among recognized Orff Schulwerk teachers using student achievement as a dependent measure.

CHAPTER THREE

Methodology

This study examined the behaviors of recognized Orff Schulwerk teachers and their students during the rehearsal of learned repertoire for percussion instruments. Most training provided in AOSA certification classes, workshops, and books focuses on the introductory process of note learning. Yet little, if any, information is provided discussing how to refine student performance after the notes have been learned. This study sought to address this issue with the following research questions:

1. In an Orff ensemble rehearsal, what behaviors do teachers and students exhibit during the rehearsal of learned repertoire for percussion instruments?

2. How often do students perform successfully?

3. What conditions are associated with student improvement?

4. What targets do teachers identify, and how often do students achieve these targets in subsequent performance trials?

A detailed description of the methodology used to answer these questions is presented in this chapter. In order to provide a broad overview, an outline of the methodology is provided below:

1. Eight teachers were identified for inclusion in this study based on their training and status. They were each videotaped across four rehearsals in their regular settings.

2. A total of 32 tapes were reviewed to identify portions of rehearsals in which teachers were rehearsing learned repertoire for percussion instruments.

3. Portions of rehearsals in which teachers were working on learned repertoire for percussion instruments were separated into Rehearsal Frame Groups (RFGs). Eighty-six RFGs, identified by the instrumental group(s) with which teachers were working during a passage of repertoire, were identified for further analysis.

4. Each RFG was viewed to transcribe and code teacher verbalizations and performance.

5. Each RFG was viewed at least five more times using a computerized program (*SCRIBE*) to record frequencies, rates, and durations of teacher behaviors and student performance.

6. Student performance in each instrumental part across every trial was viewed and evaluated using coding data in the form of plusses (+) and minuses (-) along with descriptive information.

7. Student performance evaluations were reviewed to identify improvements from previously unsuccessful trials. Transcriptions were consulted to identify any conditions associated with student improvement. These

conditions were noted and entered into a spreadsheet to identify categories of behaviors associated with student improvement.

8. Transcriptions were reviewed again to identify all teacher targets identified before, during, and after student performance trials.

9. Each student performance trial following a teacher target was viewed and evaluated to assess students' ability to achieve teacher targets.

10. Teacher targets and student performance evaluations were entered into a spreadsheet that identified target categories, the behaviors used to identify targets (directives, feedback, modeling, etc.), time of identification (before, during, or after student performance trials), and students' ability to achieve targets.

11. After targets were grouped by category, teacher behaviors observed during target identification between trials were scrutinized to identify possible differences preceding successful and unsuccessful student performance.

Subject Criteria

Teachers included in this study were chosen using a profile based on their training and status. Every teacher included was required to have Level I certification or higher approved by the American Orff-Schulwerk Association and meet at least one of the two criteria listed below:

1. Ensemble performance at a state or national convention for music educators

2. Recommendation by a current or former president of an Orff Schulwerk chapter, a university professor in music education, or a public school district music supervisor

Eight teachers who met the criteria were selected for observation. Seven resided in Texas, and one in Florida. The following section provides a profile of each teacher based on information obtained from a questionnaire (see Appendix A). To protect the anonymity and privacy of each subject, the order of teachers listed does not reflect the order of teachers in the Results chapter of this dissertation.

Subject Profiles

At the time of this study, Teacher A held a Masters degree, served as a certified AOSA trainer for Levels I, II, and III, and had been recommended by an Orff chapter president. His/her past ensembles had been invited to perform at a national convention for music educators, and s/he had presented workshops at local, state, and national conventions. Teacher Four was the most widely published instructor in this study. At the time of this research, s/he had written six books of Orff Schulwerk materials suitable for classroom use, had authored a video, and had written three articles for *The Orff Echo*. S/he had taught elementary general music for 26 years and worked with a 17-member after-school ensemble of fifth graders once per week in 60-minute sessions.

Teacher B held a Bachelors degree, had obtained Level II certification through the American Orff-Schulwerk Association (AOSA), and had been recommended by a public

school district music supervisor. His/her teaching excellence was recognized in two separate editions of *Music K*-8, a magazine for general music teachers, which features outstanding pedagogues within the field of elementary music education. S/he had taught elementary general music classes for 19 years and saw each group of students two to three times per week in 25-minute sessions. The group observed for this study was a fifth-grade music class that included 22 students.

Teacher C held a Bachelors degree, Level II AOSA certification, and was recommended for this study by a university professor in music education. S/he had taught elementary general music for four years and worked with an after-school Orff ensemble of 11 fourth- and fifth-grade students who rehearsed twice weekly in 45-minute sessions.

Teacher D held a Bachelors degree, Level II AOSA certification, and had been recommended for this study by a university professor in music education. S/he had taught elementary general music for three years and worked with an after-school ensemble of 10 fourth- and fifth-grade students twice weekly in 45-minute sessions.

Teacher E held a Bachelors degree, Level I AOSA certification, had been recommended by a public school district music supervisor, and had presented workshops utilizing Orff Schulwerk materials in Texas and New Mexico. S/he had taught elementary general music for 13 years. In addition to his/her regular classes, s/he created an after-school Orff Club for third-grade students, designed as an enrichment activity. The club consisted of 20 members that met once weekly in 45-minute sessions.

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Teacher F held two Masters degrees (one in music education and one in school administration), was an AOSA certified trainer, and was recommended by an Orff chapter president. S/he obtained training at the Orff Institute in Salzburg during one year of full-time study and had published book reviews in *The Orff Echo*. Teacher F did not have an after-school Orff ensemble, but used Orff Schulwerk materials with all her/his regular classes. The class taped for this study consisted of 25 fourth-grade students who met once every six school days in sessions lasting 45 minutes. Six months after her/his ensemble was filmed for this study, s/he presented a workshop at the national AOSA convention in Louisville, Kentucky.

Teacher G held a Masters degree, was a certified AOSA trainer, had had a past ensemble invited to perform at a state music education convention, and was recommended by an Orff chapter president. At the time of this study, s/he had taught elementary general music for 20 years and worked with a 10-member after-school Orff ensemble of fourth- and fifth-grade students twice per week in 45-minute sessions. Teacher G provided AOSA certified training for Levels I, II, and III, and had presented workshops at local, state, and national meetings for music educators. Additionally Teacher G had been published in *Connections*, produced by the Texas Music Educators Conference, as well as a local arts magazine.

Teacher H held a Masters degree, Level IV (Master Class) AOSA certification, had been recommended by an Orff chapter president, and had had a past ensemble perform at a state convention of music educators. Additionally, s/he had presented numerous Orff Schulwerk workshops at state conventions. Teacher H had taught

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elementary general music for 23 years and worked with a 45-member Orff ensemble of fourth-, fifth-, and sixth-grade students who met before school twice per week in 25-minute sessions.

Setting

Each teacher was videotaped four times in their regular setting between August 2002 and April 2003. All subjects were asked to rehearse learned repertoire for percussion instruments during these sessions. Specifically, these pieces were to represent works in the refinement stage of learning after all notes had been learned. Videotaping began as soon as rehearsal started and ended when students were dismissed. Although two groups rehearsed twice weekly, others met only once per week or less. Thus taping four rehearsals captured teachers and students over a period of time encompassing between two and four weeks during the year. The camera was positioned to include the teacher and as many students as possible on film at all times. The researcher filmed teachers residing in Texas, and a parent volunteer taped the teacher living in Florida. The parent volunteer received explicit instructions regarding camera placement and videotaping, so that procedures were consistent with those used in Texas.

Observation Procedures

After filming was completed, 32 tapes were viewed to identify periods of instruction in which teachers were working to refine learned repertoire for percussion

instruments. These excerpts were separated into Rehearsal Frame Groups, based on descriptions by Duke (1994, 1999) and Derby (2001) in previous research.

Duke (1994, 1999) defined rehearsal frames as periods of rehearsal in which a teacher identifies a target and works for improvement. Each rehearsal frame begins when a new target is introduced and continues until the teacher ceases rehearsing the target. In a study of elementary and secondary choral rehearsals, Derby (2001) modified this definition to create Rehearsal Frame Groups (RFGs). She noticed that during choral rehearsals, teachers typically repeat sections of repertoire, wherein multiple targets are rehearsed. Thus, the repertoire excerpts define the group, rather than the targets. A new RFG is identified when a new section of repertoire is rehearsed. Derby's model of Rehearsal Frame Groups (RFGs) was incorporated into this study with some slight modifications.

In elementary Orff ensemble rehearsals, teachers often require students to learn every part of a given piece. Thus, an entire rehearsal might focus on the first eight measures of music during which 12 minutes are spent rehearsing the soprano xylophone part, another 8 minutes are spent on the alto metallophone part, 10 more minutes are spent putting the alto and soprano parts together, 7 minutes are spent rehearsing the bass xylophone part, and another 4 minutes are spent putting all parts together. In this way, an RFG might be as long as 41 minutes in length. The mere length of such a group makes analysis cumbersome and fails to capture the episodic salience inherent during the rehearsal of each part. For this reason, Derby's RFG definition was incorporated in this study with the modification that a new RFG be identified by the instrumental group(s)

with which the teacher was working. If the main goal appeared to be working on one part (e.g., soprano xylophones), then the RFG was defined by that objective. If, however, the teacher's primary objective appeared to be bringing in all parts together, then the RFG was defined by that goal.

From a total 32 taped rehearsals, 86 RFGs were identified for further analysis. Each RFG was converted to an i-Movie and compressed into a Quick-Time movie using a MacIntosh laptop computer.

Each RFG was viewed to transcribe teacher behaviors and student performance into a worksheet (see Appendix B). Operational definitions of teacher and student behaviors are provided in Tables 1-3. Teacher verbalizations were coded as Directives (D), Questions (Q), Information (I), General Positive Feedback (GP), General Negative Feedback (GN), Specific Positive Feedback (SP), or Specific Negative Feedback (SN). Teacher modeling was coded as Positive Modeling (PM) or Negative Modeling (NM). In order to identify behaviors occurring between performance trials and those occurring during performance trials, all behaviors occurring during student performance were typed with an italicized font; those occurring before and after performance were typed using normal font (see Figure 2).

Student Performance Trial 1:
Teacher plays guitar accompaniment
D: Jenna!
Teacher chants conga part

D: Let me hear Jenna (conga) by herself .
PM: Teacher chants text to conga part while tapping steady beat on the guitar

Student Performance Trial 2:
Teacher accompanies on guitar and chants the words with her

D: Slow down this much
PM: Teacher chants conga text while tapping guitar

Student Performance Trial 3:
Teacher pats steady beat on the guitar while chanting the conga text.
D: Slow down
D: Slow down
D: Slow down
D: Slow down

SP: You've got the right parts
SN: But we're not all exactly the same speed.
I: Here's the beat.
D: Listen to it.
PM: Teacher pats steady beat on the guitar
D: Make your part match the speed.

Figure 2. Example of a Portion of an RFG Transcript with Coding

Completed transcriptions served as a guide during the quantification of teacher

and student behaviors using a computerized observation program known as *SCRIBE:*

Simple Computer Recording Interface for Behavioral Evaluation. Developed by Duke

and Farra (1997), *SCRIBE* allows the observer to view videotapes of teachers and

students multiple times to record designated behaviors. Describing this program, Cavitt

(1998) offers the following succinct description:

> The *SCRIBE* program creates the following data records: (1) a graphic timeline of
> the events during an observation period . . ., (2) a chronology of recorded events .
> . ., and (3) a summary table, which includes the event frequencies, rates, total
> durations, proportions of total time for each observation category, mean durations
> calculated across instances of a given behavior, and corresponding standard
> deviations (p. 73).

Each RFG was viewed five more times to record behaviors in appropriate

categories (see Figure 3). During the first viewing, frequencies and durations of student

behavior were recorded as (1) Full Ensemble Performance, (2) Full Ensemble Related

Activities, (3) Section Performance, (4) Section Related Activities, (5) Individual

Performance, and (6) Individual Related Activities. The second viewing was conducted

to record frequencies and durations of Teacher Talk and Teacher Talk During

Performance. The third viewing was used to record frequencies and durations of Positive

and Negative Modeling as well as teacher Performance With the Ensemble. During the

fourth viewing, teachers' Instructional Sequence was documented according to the

frequency and rate at which they introduced New Tasks, simplified difficult passages

(Backward), increased difficulty (Forward), or simply repeated a passage of music

(Repetition). Operational definitions for the fifth and final observation was used to

record frequency and rates of specific verbalizations according to Directives, Questions,

Information, Positive Feedback, and Negative Feedback.

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Teacher Verbalizations

Directive	Teacher Talk During Performance
Information	Teacher Talk
Questions	

Teacher Modeling and Performance

| Performance With the Ensemble | Positive Modeling |
| | Negative Modeling |

Instructional Sequence

| New Task | Forward | Backward | Repetition |

Student Performance

| Full Ensemble Performance | Section Performance | Individual Performance |
| Full Ensemble Related Act. | Section Related Act. | Individual Related Act. |

Figure 3. Example of *SCRIBE* Input Window

After *SCRIBE* data were collected, directives from each RFG's transcript were copied and isolated in the worksheet for further analysis. Each directive was coded as either Musical if it served a musical purpose or Procedural if its only function was to direct students where and when to play their parts. Similarly, all Positive and Negative Feedback statements were isolated and counted.

Assessing Student Performance

Results from a pilot study demonstrated that teachers often did not explicitly identify teacher targets. For this reason, student performance in this study was initially evaluated in each instrumental part across all trials for accuracy or improvement, irrespective of targets identified by teachers. A performance grid was created for each RFG, leaving room to evaluate each instrumental part's trials with a plus (+) or a minus (-) and to add commentary describing the reasons for each assessment (See Figure 4). Operational definitions of student success are provided in Table 4. A plus (+) was assigned to every trial in which student performance was accurate or represented an improvement from the previous trial. A minus (-) was assigned if student performance was inaccurate, with no signs of improvement from the previous trial. If student performance in one trial demonstrated improvement from a previous trial, but was still inaccurate, it received a plus (+) for improvement. However, if the subsequent trial represented positive repetition of the previous trial's improvement, with no further improvement toward accuracy, it received a minus (-). Thus, in order to receive a plus, each trial had to represent accuracy or, if inaccurate, continued improvement throughout

the RFG.   Student performances that could not be evaluated due to audio or visual difficulty were notated with a slash (/). (Audio difficulties were rare and usually occurred as a result of student off-task talking. Visual difficulties were usually due to students sitting outside the camera's range during taping.) When students did not play during a trial, their part was notated with a zero (0). After all trials were evaluated, descriptive commentary was reviewed, and the most salient performance problem(s) were noted for the entire RFG.

	1	2	3	4	5
Conga	- Rushing	- Rushing	+ Slight improvement. At times she still rushes, but it's better. Toward the end (after other parts come in) she rushes a lot	+ Much improved. This was a short trial	- She started out maintaining the improvement. On the 5th (and last) repetition of her pattern, she rushed terribly.
Cowbell	+ Accurate	0	- He started out well, then rushed	- He rushes	+ Better, but still not completely controlled
Guiro	- He started out well and then began to drag at the end of the trial	0	- Again, he started out well and then slowed down in one part.	+ He maintained the good start he had before; however, this was a very short trial (4 seconds)	- Again, he started well and then drug at the end. At times in the middle, I sensed he was fighting against this tendency.
Maracas	- No rhythmic accuracy	0	+ Better, but still not completely stable	- Rushing more than last time	- She gets worse (rushing)

Figure 4. Example of a Performance Evaluation Grid for an RFG

After student performance assessment was completed, each performance trial

from the evaluation grid was copied and pasted into the original transcript (See Figure 5).

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Student Performance Trial 1
Teacher plays guitar accompaniment
D: Jenna!
Teacher chants conga part

	1
Conga	- Rushing
Cowbell	+
Guiro	- He started out well and then began to drag at the end of the trial
Maracas	- No rhythmic accuracy

D: Let me hear Jenna (conga) by herself .
PM: Teacher chants text to conga part while tapping steady beat on the guitar

Student Performance Trial 2:
Teacher accompanies on guitar and chants the words with student

	2
Conga	- Rushing
Cowbell	0
Guiro	0
Maracas	0

Figure 5. Example of an RFG Transcript with Performance Trial Evaluations
        Inserted from the Performance Evaluation Grid

Performance grids were reviewed to identify every evaluation representing improvement from a previous trial. Transcriptions were consulted to identify teacher behaviors preceding these improvements. These teacher behaviors were noted and recorded at the end of each worksheet.

Following this procedure, each transcription was copied and reviewed again to identify explicit teacher targets identified through Directives, Information, Questions, Feedback, and Modeling. In order to separate targets from other activities, all other verbalizations and student performance trials were deleted. Notes were added to indicate whether targets were identified before (b), during (d), or after (a) group performance trials (See Figure 6).

D: Slow down this much
PM: Teacher chants conga text while tapping guitar (a2)
D: Slow down (d3)
D: Slow down (d3)
 D: Slow down (d3)
D: Slow down (d3)
SP: You've got the right parts
SN: But we're not all exactly the same speed.
I: Here's the beat.
D: Listen to it.
PM: Teacher pats steady beat on the guitar
D: Make your part match the speed. (a3)

Figure 6. Example of Teacher Targets Identified from Transcripts

After teacher targets were identified, student performance was evaluated to determine whether students performed each teacher target successfully. If targets were identified between trials, student performance was evaluated in the next performance trial. If targets were identified during trials, student performance was evaluated during the trial as soon as the teacher stopped speaking. Because these evaluations were group

assessments, a performance grid similar to the one described earlier was unnecessary.   If

students performed with accuracy or improvement, the word "Yes" was placed in the

worksheet after the target. If students did not achieve the teacher's identified target with

accuracy or improvement, the word "No" was placed in the worksheet after the target

(see Figure 7).

D: Slow down this much
PM: Teacher chants conga text while tapping guitar (a2) **Yes**
D: Slow down (d3)Yes
D: Slow down (d3)Yes
D: Slow down (d3)Yes
D: Slow down (d3)Yes
SP: You've got the right parts
SN: But we're not all exactly the same speed.
I: Here's the beat.
D: Listen to it.
PM: Teacher pats steady beat on the guitar
D: Make your part match the speed. (a3) **Yes, at the beginning**

Figure 7. Example of Teacher Targets and Evaluations of Student Performance

All teacher targets and student performance evaluations were entered into an

EXCEL spreadsheet. Data were grouped according to target categories, teacher

behaviors during target identification (Directives, Feedback, Modeling, etc.), time of

identification (before, during, or after student performance trials), and assessments of

students' ability to achieve targets. Teacher behaviors preceding successful student

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performance were compared to teacher behaviors preceding unsuccessful student performance.

Behavior Categories

To create operational definitions of teacher and student behaviors, definitions were adapted from previous research examining teacher-student interactions during instruction (Buckner, 1997; Cavitt, 1998; Colprit, 2000, Derby, 2001). All behaviors recorded by duration, frequency, and rates are presented in Table 1. These timed events include Teacher Verbalizations, Teacher Modeling, and Student Performance. All events recorded according to frequency and rates of behavior are presented in Table 2. These behaviors include the content of verbalizations in categories of Directives, Information, Questions, Positive Feedback, and Negative Feedback.

Operational definitions of Instructional Sequence in an Orff Schulwerk setting were adapted from those used by Duke & Madsen (1991) and Siebenaler (1997). *SCRIBE* was used to record the frequency and rate at which teachers introduced new tasks, simplified difficult passages, increased difficulty, or repeated a passage. As defined in Table 3, these instructions were coded in the following manner: New Task, Backward, Forward, and Repetition.

Operational definitions of successful and unsuccessful performance trials categories, as adapted from those used by Derby (2001), are provided in Table 4.

Table 1

Operational Definitions for Durations of Teacher and Student Behaviors Recorded Using SCRIBE

_____

Teacher Verbalization Categories

Teacher Talk: Teacher verbalizations in the absence of student musical performance.

Teacher Talk During Performance: Teacher verbalizations during student musical performance.

Teacher Modeling Categories

Positive Modeling: Teacher behavior occurring between student performance trials in which the teacher sings, chants, plays an instrument, mimics playing an instrument (e.g., moving arms in the air to demonstrate mallet technique), or assumes proper posture to demonstrate the correct performance of a passage.

Negative Modeling: Teacher performance occurring between student performance trials in which the teacher sings, chants, plays an instrument, mimics playing an instrument (e.g., moving arms in the air to demonstrate mallet technique), or assumes improper posture to demonstrate the incorrect performance of a passage.

Teacher Performance with the Ensemble: Teacher performance (modeling) occurring simultaneously with student performance, including singing, chanting, patting, snapping, playing an instrument, or movement that mimics playing an instrument.

Student Performance Categories

Full Ensemble Performance: Student performance by the entire ensemble

Full Ensemble Related Activities: Student performance by the entire ensemble in which the music is altered in some way such as chanting, clapping, playing barred instruments with fingers or with the mallets turned backward, or playing barred instruments while singing or chanting note names.

_____

(Table 1 continues)

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(Table 1 continued)

Section Performance: Student performance by a section of the ensemble.

Section Related Activities: Student performance by a section of the ensemble in which the music is altered in some way such as chanting, clapping, playing barred instruments with fingers or with the mallets turned backward, or playing barred instruments while singing or chanting note names.

Individual Performance: Student performance by an individual in the ensemble.

Individual Related Activities: Student performance by an individual in which the music is altered in some way such as chanting, clapping, playing barred instruments with fingers or with the mallets turned backward, or playing barred instruments while singing or chanting note names.

Table 2

Operational Definitions for Frequency of Teacher Behaviors Recorded Using SCRIBE

_____

Teacher Verbalization

_____

Directive: Procedural or Musical instruction given to students between and during performance trials. Procedural directives include instructions regarding where to begin in the music and who plays. Musical directives refer to aspects of musical expression such as dynamics or tempo (e.g., "Bass xylophones, play softer." "Let's speed up this passage."); technique ("Hold your mallets in the middle." "Play in the middle of the bars."); or precision and note accuracy ("Play together." "Play high D."). Other directives may refer to discipline ("Jane, please don't play when I'm talking."). Not included in this category are signals to start or stop (e.g., "one, two, ready, go").

Information: Teacher verbalization that conveys information about the subject matter but does not direct the student to perform any specific action (e.g., "Orff wrote *Carmina Burana*." "Glockenspiels are difficult to play because the bars are smaller than those on any other instrument.").

Question: "On-task" question posed by the teacher related to the subject matter or rehearsal and to which the teacher expects a student response (e.g., "How many times should you repeat this motive?" "Why should we play in the middle of the bars?"). This category does not include rhetorical questions for which no student response is expected (e.g., "That's a really hard section, isn't it?") or questions that do not pertain to the task at hand (e.g., "Did you bring your candy money?").

Specific Positive Feedback: Positive evaluations of preceding trials that describe one or more specific aspects of performance (e.g., "I liked the way you kept the tempo steady.")

General Positive Feedback: Positive evaluations of preceding trials that do not describe any specific aspects of performance (e.g., "Good job!")

Specific Negative Feedback: Negative evaluations of preceding trials that describe one or more specific aspects performance (e.g., "You're rushing.")

General Negative Feedback: Negative evaluations of preceding trials that do not describe any specific aspects of performance (e.g., "That's not good.")

_____

Table 3

Operational Definitions for Frequency of Teacher's Instructional Sequence using
SCRIBE

Forward (→)

The assigned task adds a new degree of complexity (moving to a new section, playing faster, playing longer sections, or adding other parts).

Backward (←)

The assigned task simplifies the skill, breaking the task down into sub-skills, or reducing the musical material (isolating technical problems, working on a smaller section of the previous performance, slowing the tempo, or playing alone without other parts).

Repeat (R)

The assigned task is a repetition of the preceding task. The repetition is intended to improve, correct, or reinforce the target skills. This category included repeated attempts to achieve the goal without changing the complexity of the music performed.

New Task (N)

The assigned task is a new student performance behavior, distinct from the previous task (a new part is addressed; student sings, claps, or counts a piece previously played).

Table 4

Operational Definitions of Successful and Unsuccessful Student Performance Trials

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Quality of Student Performance

Successful Performance (+): The student performance was accurate or represented an improvement from the previous trial.

Unsuccessful Performance (-): The student performance was unsuccessful and failed to demonstrate improvement from a previous trial.

Unevaluated Performance (/): Students performed, but the observer could not evaluate accuracy due to an inability to hear or see students.

Unevaluated Performance (0): Students did not perform during the trial.

Reliability

Reliability was conducted to assess transcript content and accuracy of student performance evaluations. Twenty percent of each teacher's RFGs were randomly selected and presented for analysis to a trained observer. The observer, a former middle school band director, was a Ph.D. graduate student in music education engaged in her final semester of coursework. She had completed several research projects and was competent in systematic observation.

The narrative statements used to describe the rationale behind each performance evaluation provided a unique challenge in assessing reliability. Recording descriptive observations independently could overlook some details found in the original transcripts.

It was essential to determine whether another observer could see and hear every detail recorded in the original transcripts. Thus for this study, the observer was asked to view each tape while reading the original transcripts and performance evaluations. Any disagreements with data were highlighted. This procedure provided scrutiny of every detail in each transcript and performance evaluation.

First, the observer viewed the tapes for 18 RFGs while reading the researcher's completed transcripts. Any disagreements with either coding or specific verbalizations were highlighted. During subsequent viewings, the observer evaluated student performance in each instrumental part across each trial by reading the researcher's evaluations and highlighting any areas of disagreement with the overall assessment or descriptive narrative. Reliability for transcript accuracy and evaluation of student performance were both calculated by dividing the number of agreements by the total number of agreements and disagreements. Inter-observer reliability was 98.7% for transcript accuracy and 96.0% for evaluation of student performance.

CHAPTER FOUR

Results

This study examined teaching effectiveness among recognized Orff Schulwerk teachers using student achievement as a dependent measure. Specifically, this study examined how teachers refine learned repertoire for percussion instruments. Student performance was evaluated in two ways. First, each instrumental part was assessed in every performance trial, irrespective of teacher targets. Then, on another review of the videotapes, teacher targets were identified, and students' achievement of these objectives was measured.

Eight recognized Orff Schulwerk teachers and their upper-elementary students (Grades 3-6) agreed to be videotaped across four rehearsals in their regular settings as they rehearsed learned repertoire for percussion instruments. From these tapes, repertoire passages in which teachers were focused on improving one or more aspects of student performance were isolated and identified as Rehearsal Frame Groups (RFGs). A total of 86 RFGs were included in this study.

Timings for teacher and student behaviors in every RFG were recorded using *SCRIBE*, a computerized software program that provides durations, frequencies, rates, and percentages of isolated behaviors. Results from *SCRIBE* data were entered into an EXCEL spreadsheet to calculate means and standard deviations across each teacher's

rehearsals and across all teachers. Additionally, student performance evaluations were counted and reported.

Results in this chapter are organized around the research questions posed in chapter 1:

1. In an Orff ensemble rehearsal, what behaviors do teachers and students exhibit during the rehearsal of learned repertoire for percussion instruments?

2. How often do students perform successfully?

3. What conditions are associated with student improvement?

4. What targets do teachers identify, and how often do students achieve these targets in subsequent performance trials?

Videotape Data

Tables 5 and 6 summarize data derived from 32 videotapes, which includes four rehearsals from each of eight recognized Orff Schulwerk teachers. The duration of most rehearsals was approximately 45 minutes long. As seen in Table 5, total rehearsal time across all teachers encompassed 22 hours 20 minutes. Fifty-six percent of that time (approximately 12 hours 30 minutes) was spent rehearsing learned repertoire for percussion instruments. From these 12 hours and 30 minutes, 86 Rehearsal Frame Groups (RFGs) were identified, representing approximately 6 hours 45 minutes dedicated to improving student performance during the rehearsal of learned repertoire for percussion instruments. The number of RFGs identified for each teacher ranged from as few as 4 for Teacher 1 to as many as 19 for Teacher 4. A variety of factors contributed to

low frequencies of RFGs among some teachers.   Several teachers were working with performing ensembles. Time constraints mandated that they must introduce new materials during rehearsals in order to prepare for upcoming concerts. One teacher expressed concern that students would be bored rehearsing the same repertoire more than one or two classes. Therefore, new material was added in the form of improvisations and movement activities. One teacher had limited instruments, forcing students to share during portions of rehearsal. Periods of rehearsal in which students shared instruments were excluded from analysis in this study.

Table 6 shows that the duration of each RFG across all teachers ranged in length from as brief as 17 seconds to as long as 16 minutes 31 seconds, with a mean of 4 minutes 42 seconds. The mean number of group performance trials in each RFG across all teachers was 7.8 with a standard deviation of 6.8, representing somewhat wide variability in the frequency of student performance opportunities.

Table 5

Total Duration of Rehearsal Time, Total Duration of Rehearsal Time Devoted to Learned Repertoire for Percussion Instruments, Percentage of Rehearsal Time Devoted to Rehearsal of Learned Repertoire for Percussion Instruments, Number of RFGs, Total Duration of RFGs, and Percentage of Percussion Repertoire Rehearsal Time Devoted to RFGs

Teacher	Total Duration of Rehearsal Time (hr/min)	Total Duration of Rehearsal Time Devoted to Learned Repertoire for Percussion Instruments (hr/min/sec)	Percentage of Class Time Devoted to Rehearsal of Learned Repertoire for Percussion Instruments	Number of RFGs	Total Duration of RFGS (hr/min/sec)	Percentage of Percussion Repertoire Rehearsal Time Devoted to RFGs
1	01:40	00:47:29	47	4	00:17:01	36
2	03:00	02:12:56	74	16	00:50:38	38
3	03:00	02:05:30	70	16	01:50:45	88
4	04:00	02:03:13	51	19	01:03:38	52
5	03:00	01:00:51	34	8	00:45:49	75
6	03:00	01:48:03	60	5	00:12:10	11

(Table 5 continued)

Teacher	Total Duration of Rehearsal Time (hr/min)	Total Duration of Rehearsal Time Devoted to Learned Repertoire for Percussion Instruments (hr/min/sec)	Percentage of Class Time Devoted to Rehearsal of Learned Repertoire for Percussion Instruments	Number of RFGs	Total Duration of RFGS (hr/min/sec)	Percentage of Percussion Repertoire Rehearsal Time Devoted to RFGs
7	01:40	00:53:39	54	9	00:40:38	76
8	03:00	01:39:01	55	9	01:03:48	64
Overall	22:20	12:30:42	56	86	06:44:27	54

Table 6

Number of RFGs, Total Duration of RFGs, Range of RFG Durations, Mean Duration of RFGs, and Mean Number of Group Performance Trials per RFG for Each of Eight Teachers

Teacher	Total Number of RFGs	Total Duration of RFGs (hr/min/sec)	Range of RFG Durations (min/sec)	Mean Duration of RFGs (min/sec)		Mean Number of Group Performance Trials per RFG	
				M	*SD*	*M*	*SD*
1	4	00:17:01	2:05 – 6:14	4:15	1:31	7.0	4.3
2	16	00:50:38	0:17 – 7:14	3:10	2:49	5.2	3.3
3	16	01:50:45	2:54 –16:31	6:55	3:54	7.3	4.4
4	19	01:03:38	0:47 – 7:12	3:21	1:49	4.4	2.3
5	8	00:45:49	2:24 – 11:15	5:44	2:50	11.5	5.6
6	5	00:12:10	0:30 – 5:00	2:26	1:45	5.6	3.0
7	9	00:40:38	1:25 – 8:10	4:31	2:17	8.8	5.8
8	9	01:03:48	1:21 –14:22	7:05	4:13	17.4	12.4
Overall	86	06:44:27	0:17 –16:31	4:42	3:21	7.8	6.8

Question 1: In an Orff ensemble rehearsal, what behaviors do teachers and students exhibit during the rehearsal of learned repertoire for percussion instruments?

Teacher Behaviors

Teacher behaviors were observed according to verbalizations, performance, and instructional sequence. Categories of teacher verbalizations included Teacher Talk, Teacher Talk During Performance, Directives, Questions, Information, Positive Feedback, and Negative Feedback. Categories of teacher performance included Positive Modeling, Negative Modeling, and Performance with the Ensemble. Categories of instructional sequence included New Task, Forward, Backward, and Repetition. (For operational definitions of each category, refer to Tables 1-3 in chapter 3.)

Table 7 presents percentages, rates and durations of teacher behaviors across RFGs. Teacher Talk (33.2%) and Teacher Talk During Performance (4.1%) represented 37.3% of the mean rehearsal frame duration. Teacher Talk occurred at a rate greater than 5 times per minute in mean episode durations of almost 4 seconds. The standard deviation of Teacher Talk episodes was 4.1 seconds. Teacher Talk During Performance occurred less frequently at 2.3 times per minute in durations of about 1 second. These short verbalizations usually served as quick "coachings" during performance. At a rate of 5.4 times per minute, Directives were observed about five times more often than any other verbalization category across Teacher Talk and Teacher Talk During Performance. Further analysis gathered from transcripts revealed that 59% of these directives were procedural rather than musical in nature. Thus, the majority of directives merely

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informed students about who would play and when, rather than how to play differently to achieve a desired effect. Other verbalization categories revealed that Questions, Information, and Positive Feedback occurred approximately once every minute. Conversely, Negative Feedback occurred half as often, about once every two minutes. Further analysis of feedback statements from transcripts demonstrated that 54% of feedback was General Positive, 25% was Specific Negative, 15% was Specific Positive, and only 6% was General Negative. Tables 8 and 9 report means and standard deviations of verbalizations for each teacher.

Observations of teacher performance across all teachers, as seen in Table 7, indicate that teachers spent almost 30% of rehearsal time performing with their students during performance trials. While often not performing throughout entire trials, teachers "jumped in" and performed with their students almost 2 times per minute in episodes lasting about 10 seconds on average. When performing alone, teachers spent about 10% of rehearsal time modeling, with Positive Modeling occurring eight times more often than Negative Modeling. Durations of each type of modeling were usually short; however, Positive Modeling usually lasted three times longer (3.3 seconds) than Negative Modeling (1.0 seconds). Tables 10 and 11 provide means and standard deviations for each teacher's performance activities during RFGs.

Table 7 shows that across all teachers' Instructional Sequence, teachers introduced new tasks, increased difficulty, or repeated a passage much more frequently than they simplified a task that had already been performed.   Because teachers often introduced a new task as a decontextualized part of a passage, these figures do not reflect

a lack of decontextualization. Rather they demonstrate that when students were having

problems with a given passage, teachers rarely made the task easier than first presented.

Table 12 presents means and standard deviations for each teacher's Instructional

Sequence.

Table 7

Mean Proportion of Total Rehearsal Frame Duration, Mean Rate per Minute, Mean Episode Duration (in seconds), and Standard Deviation for Observed Teacher Behavior Across All Rehearsal Frame Groups (N = 86)

Observation Categories	Proportion of Total Frame Duration		Rate per Minute		Episode Duration (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Teacher Talk	33.2	10.7	5.3	1.8	3.9	4.1
Teacher Talk During Performance	4.1	3.0	2.3	1.5	1.1	0.8
Directives	–	–	5.4	1.8	–	–
Questions	–	–	0.9	0.9	–	–
Information	–	–	1.0	0.8	–	–
Positive Feedback	–	–	1.1	0.7	–	–
Negative Feedback	–	–	0.5	0.6	–	–
Positive Modeling	8.7	6.7	1.6	1.1	3.3	2.8
Negative Modeling	0.9	2.2	0.2	0.4	1.0	2.0
Teacher Performance with the Ensemble	29.5	18.1	1.8	1.0	9.9	13.3

(Table 7 continued)

Observation Categories	Proportion of Total Frame Duration		Rate per Minute		Episode Duration (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Instructional Sequence: New Task	–	–	0.5	0.4	–	–
Instructional Sequence: Forward	–	–	0.6	0.6	–	–
Instructional Sequence: Backward	–	–	0.2	0.4	–	–
Instructional Sequence: Repetition	–	–	0.8	0.9	–	–

Table 8

Mean Proportion of Total Rehearsal Frame Duration, Mean Episode Duration (in seconds), and Standard Deviation Devoted to Teacher Talk and Teacher Talk During Performance for Each Teacher

Teacher	Proportion of Teacher Talk (%)		Episode Duration of Teacher Talk (secs)		Proportion of Teacher Talk During Performance (%)		Episode Duration of Teacher Talk During Performance (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	32.6	5.2	4.3	3.4	3.5	2.9	1.3	1.1
2	37.7	8.3	4.0	4.3	5.4	3.6	1.2	0.9
3	28.4	9.1	3.3	3.4	5.9	3.3	1.1	0.7
4	24.7	9.1	3.5	3.1	4.2	2.4	1.1	0.8
5	42.4	7.5	4.9	4.1	2.5	1.2	1.1	0.8
6	49.5	7.1	5.7	5.7	0.1	0.1	1.0	0.0
7	32.6	5.6	3.5	3.6	1.8	0.8	0.8	0.5
8	34.8	8.6	4.3	5.2	4.5	1.5	1.3	0.9
Overall	33.2	10.7	3.9	4.1	4.1	3.0	1.1	0.8

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Table 9

Mean Rate Per Minute and Standard Deviation of Teacher Talk, Teacher Talk During Performance, Directives, Questions, Information, Positive Feedback, and Negative Feedback for Each Teacher

Teacher	Teacher Talk		Teacher Talk During Performance		Directives		Questions		Information		Positive Feedback		Negative Feedback	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	4.7	0.5	1.6	1.0	4.7	0.8	1.8	0.8	1.6	0.7	1.6	0.6	0.3	0.2
2	5.9	1.5	2.7	1.4	5.8	2.0	1.8	1.0	1.1	0.8	1.3	0.8	1.0	1.0
3	5.3	2.3	3.3	1.6	6.1	1.0	0.6	0.5	0.8	0.4	0.9	0.6	0.2	0.3
4	4.5	2.4	2.7	1.4	4.5	1.2	0.4	0.6	0.8	1.0	0.9	0.7	0.4	0.4
5	5.5	1.3	1.4	0.8	7.2	1.6	1.5	0.7	1.0	0.5	0.9	0.6	0.4	0.3
6	6.1	1.4	0.04	0.1	6.1	1.8	0.9	1.2	0.7	0.4	0.7	0.4	0.8	0.7
7	5.6	1.2	1.4	0.7	4.4	1.2	0.6	0.7	1.0	0.6	0.8	0.7	0.4	0.3
8	5.1	1.1	2.1	0.8	4.5	1.0	0.7	0.4	1.2	0.8	1.7	0.8	0.7	0.3
Overall	5.3	1.8	2.3	1.5	5.4	1.8	0.9	0.9	1.0	0.8	1.1	0.7	0.5	0.6

Table 10

Mean Proportion of Total Rehearsal Frame Duration, Mean Episode Duration (in seconds), and Standard Deviation Devoted to Positive Modeling, Negative Modeling, and Performance with the Ensemble for Each Teacher

Teacher	Proportion of Positive Modeling (%)		Episode Duration of Positive Modeling (secs)		Proportion of Negative Modeling (%)		Episode Duration of Negative Modeling (secs)		Proportion of Teacher Performance with the Ensemble (%)		Episode Duration of Teacher Performance with the Ensemble (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	7.4	3.6	4.4	2.6	0.0	0.0	0.0	0.0	23.9	10.0	6.8	7.4
2	8.0	7.3	3.1	3.0	2.8	3.7	4.2	3.2	21.8	13.9	9.3	8.3
3	4.8	4.4	3.5	2.8	0.03	0.1	2.0	0.0	25.2	16.8	7.3	8.6
4	12.6	8.0	3.7	3.5	0.3	0.6	1.8	1.2	45.8	18.7	20.2	24.6
5	10.5	5.5	3.2	2.4	1.8	1.9	2.4	1.7	13.4	12.9	5.9	6.6
6	8.8	4.2	2.5	1.7	1.8	3.5	2.5	1.5	32.9	6.6	8.1	7.6

(Table 10 continues)

(Table 10 continued)

Teacher	Proportion of Positive Modeling (%)		Episode Duration of Positive Modeling (secs)		Proportion of Negative Modeling (%)		Episode Duration of Negative Modeling (secs)		Proportion of Teacher Performance with the Ensemble (%)		Episode Duration of Teacher Performance with the Ensemble (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
7	6.7	5.5	2.5	1.6	0.04	0.1	1.0	0.0	24.6	9.4	7.6	7.5
8	9.2	4.7	3.2	2.8	0.7	0.6	2.1	1.3	36.3	13.8	10.6	12.0
Overall	8.7	6.7	3.2	2.8	0.9	2.2	2.4	2.3	29.5	18.0	9.9	13.4

Table 11

Mean Rate Per Minute and Standard Deviation for Positive Modeling, Negative Modeling, and Performance with the Ensemble for Each Teacher

Teacher	Positive Modeling		Negative Modeling		Teacher Performance with the Ensemble	
	M	*SD*	*M*	*SD*	*M*	*SD*
1	0.9	0.3	0.0	0.0	2.2	1.0
2	1.6	1.6	0.4	0.4	1.6	1.1
3	0.9	0.9	0.01	0.02	1.9	0.8
4	1.9	1.2	0.1	0.3	1.8	1.2
5	2.0	0.6	0.5	0.4	1.2	0.8
6	2.0	0.8	0.4	0.8	2.8	1.5
7	1.6	1.1	0.02	0.1	2.0	0.6
8	1.7	0.7	0.2	0.2	1.9	0.3
Overall	1.6	1.1	0.2	0.4	1.8	1.0

Table 12

Mean Rate Per Minute and Standard Deviation for Each Teacher's Instructional Sequence

Teacher	New Task		Forward		Backward		Repetition	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	0.4	0.2	0.8	0.1	0.2	0.2	0.4	0.4
2	0.7	0.7	0.2	0.2	0.3	0.8	1.3	1.3
3	0.3	0.1	0.3	0.3	0.2	0.2	0.5	0.4
4	0.5	0.3	0.8	0.6	0.2	0.3	0.7	0.5
5	0.5	0.4	1.1	0.8	0.1	0.2	0.3	0.3
6	0.8	0.6	0.1	0.1	0.2	0.3	1.8	1.1
7	0.4	0.2	0.7	0.4	0.3	0.2	0.7	0.3
8	0.2	0.2	0.8	0.5	0.3	0.2	1.3	0.8
Overall	0.5	0.4	0.6	0.6	0.2	0.4	0.8	0.9

Student Behaviors

Student behaviors were categorized as Full Ensemble, Section, or Individual Performance, and Related Activities. (For operational definitions, see Table 1 in chapter 3) A pilot study indicated that student talk was so minimal as to not warrant observation in a larger study.

Table 13 presents summary data for student behaviors across all teachers' ensembles. Overall, students performed about 50% of the time during RFGs. Full Ensemble Performance (27.9%) represented the largest portion of this percentage, followed by Section Performance (14.1%), Full Ensemble Related Activities (4.1%) and Individual Performance (3.8%). Related Activities among sections and individuals consumed less than 1% of rehearsal time in RFGs.

When performing as a full ensemble, students played for an average duration of 25.4 seconds at a rate of nearly one episode per minute. Mean episode durations for all other categories of student performance or related activities were much shorter. The longest of these was Section Performance with a mean duration of 14.2 seconds, occurring at a rate slightly over one episode every two minutes. Mean episode durations for all other categories were less than 10 seconds.

Importantly, in many categories of student performance or related activities, the standard deviation was higher than the mean, indicating a wide variability of proportion, rate, and episode duration. For instance, the mean episode duration for Full Ensemble Performance was 25.4 seconds with a corresponding standard deviation of 28.9 seconds. The raw data show that some of these student performance episodes were longer than 2

minutes, providing infrequent opportunities for teacher instruction between episodes. These durations may be viewed as exceptionally lengthy in light of the repetitive tasks involved in many Orff Schulwerk compositions based on ostinati. Tables 14-17 show means and standard deviations for proportions, mean episode durations, and rates of student behaviors in each teacher's ensemble.

Table 13

Mean Proportion of Total Rehearsal Frame Duration, Mean Rate per Minute, Mean Episode Duration (in seconds), and Standard Deviation for Observed Student Behavior Across All RFGs (N = 86)

Observation Categories	Proportion of Total Frame Duration		Rate per Minute		Episode Duration (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Full Ensemble Performance	27.9	21.5	0.9	1.4	25.4	28.9
Full Ensemble Related Activities	4.1	10.1	0.2	0.6	8.3	8.8
Section Performance	14.1	17.9	0.6	0.9	14.2	13.6
Section Related Activities	0.1	0.6	0.01	0.1	5.8	2.9
Individual Performance	3.8	8.9	0.4	1.1	6.2	5.1
Individual Related Activities	0.02	0.1	0.002	0.02	4.0	0.0

Table 14

Mean Proportion of Total RFG Duration, Mean Episode Duration (in seconds), and Standard Deviation Devoted to Full Ensemble Performance and Full Ensemble Related Activities for Each Teacher

Teacher	Proportion of Full Ensemble Performance (%)		Episode Duration of Full Ensemble Performance (secs)		Proportion of Full Ensemble Related Activities (%)		Episode Duration of Full Ensemble Related Activities (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	17.1	17.6	63.3	58.2	0.0	0.0	0.0	0.0
2	22.1	18.3	14.3	13.6	11.4	16.4	15.9	10.9
3	44.6	19.1	41.5	39.4	2.2	4.1	12.7	14.1
4	22.6	23.4	34.5	29.5	2.5	10.5	7.7	3.1
5	24.8	10.2	20.4	21.1	9.0	8.0	6.4	6.6
6	5.9	11.8	14.0	10.8	0.0	0.0	0.0	0.0
7	28.7	16.8	22.4	13.0	0.0	0.0	0.0	0.0
8	38.5	18.8	9.3	8.7	1.5	3.5	5.8	5.1
Overall	27.9	21.5	25.4	28.9	4.1	10.1	8.3	8.8

Table 15

Mean Proportion of Total Rehearsal Frame Duration, Mean Episode Duration (in seconds), and Standard Deviation Devoted to Section Performance and Section Related Activities for Each Teacher

Teacher	Proportion of Section Performance (%)		Episode Duration of Section Performance (secs)		Proportion of Section Related Activities (%)		Episode Duration of Section Related Activities (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	29.0	13.1	13.8	12.5	1.9	1.9	5.8	2.9
2	11.8	18.3	11.1	6.8	0.0	0.0	0.0	0.0
3	2.7	6.3	25.0	14.7	0.0	0.0	0.0	0.0
4	23.3	17.7	20.5	17.2	0.0	0.0	0.0	0.0
5	4.8	5.3	8.8	5.1	0.0	0.0	0.0	0.0
6	20.5	17.1	8.7	6.3	0.0	0.0	0.0	0.0
7	25.3	21.5	11.2	11.0	0.0	0.0	0.0	0.0
8	5.7	13.5	16.8	17.0	0.0	0.0	0.0	0.0
Overall	14.1	17.9	14.2	13.6	0.1	0.6	5.8	2.9

Table 16

Proportion of Total Rehearsal Frame Duration, Mean Episode Duration (in seconds), and Standard Deviation Devoted to Individual Performance and Individual Related Activities for Each Teacher

Teacher	Proportion of Individual Performance (%)		Episode Duration of Individual Performance (secs)		Proportion of Individual Related Activities (%)		Episode Duration of Individual Related Activities (secs)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	2.6	4.0	8.3	4.1	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	3.4	9.4	6.1	4.8	0.1	0.3	4.0	0.0
4	4.9	8.0	7.5	6.3	0.0	0.0	0.0	0.0
5	2.3	4.6	4.8	3.6	0.0	0.0	0.0	0.0
6	8.6	15.5	3.7	1.2	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	3.9	10.9	6.0	0.0	0.0	0.0	0.0	0.0
Overall	3.8	8.9	6.2	5.1	0.02	0.1	4.0	0.0

Table 17

Rate Per Minute and Standard Deviation for Observed Student Performance (Full Ensemble, Section, Individual, Full Ensemble Related Activities, Section Related Activities, and Individual Related Activities) for Each Teacher

Teacher	Full Ensemble		Section		Individual		Full Ensemble Related Activities		Section Related Activities		Individual Related Activities	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	0.2	0.2	1.1	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0
2	1.5	2.7	0.7	1.3	0.0	0.0	0.4	0.7	0.0	0.0	0.0	0.0
3	0.7	0.4	0.1	0.1	0.3	0.6	0.1	0.3	0.0	0.0	0.01	0.04
4	0.5	0.6	0.8	0.7	0.2	0.2	0.2	0.8	0.0	0.0	0.0	0.0
5	0.7	0.2	0.3	0.3	0.3	0.6	0.8	0.7	0.0	0.0	0.0	0.0
6	0.2	0.5	1.4	1.1	1.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0
7	0.8	0.5	1.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	1.7	1.2	0.2	0.5	0.4	1.0	0.2	0.6	0.0	0.0	0.0	0.0
Overall	0.9	1.4	0.6	0.9	0.4	1.1	0.2	0.6	0.01	0.1	0.002	0.02

Question 2: How often do students perform successfully?

Each instrumental part was evaluated in every performance trial to measure student accuracy, irrespective of teacher targets. As discussed in chapter 3, trials were evaluated with a plus (+) if students played accurately or demonstrated improvement from a previous trial. Trials were evaluated with a minus (-) if students played inaccurately or failed to demonstrate improvement from a previous trial. Descriptive information accompanied most assessments in order to provide data regarding the nature of student performance problems and improvement. After evaluations were completed, descriptive data were reviewed to determine the most salient performance problems observed in each RFG.

Table 18 shows that in 86 RFGs across eight teachers, students performed 667 group trials. Individual instrumental parts assessed within these group trials resulted in a total of 1,240 separate performance evaluations. Results show that across 1,240 separate evaluations, students demonstrated a 29% rate of accuracy or improvement. Table 19 shows that the most salient performance problems observed were Pulse and Precision. In fact, either Pulse or Precision (or both) was found to be the most salient performance problem in 74 of 86 total RFGs.

Table 20 shows that teachers in this study verbally identified targets before only 318 of the 667 performance trials, resulting in a 48% rate of target identification. Thus, teachers identified targets before less than half of all student performance trials.

Table 18

Student Performance: Frequency of RFGs, Number of Trials Evaluated in Instrumental Parts, and Frequency and Percentage of Student Success for Each Teacher

Teacher	RFGs	Number of Trials Evaluated in Instrumental Parts	Frequency Successful	Frequency Unsuccessful	Percentage Successful	Percentage Unsuccessful
1	4	38	14	24	37	63
2	16	106	39	67	37	63
3	16	297	79	218	27	73
4	19	218	78	140	36	64
5	8	112	15	97	13	87
6	5	45	12	33	27	73
7	9	211	47	164	22	78
8	9	213	78	135	37	63
Overall	86	1,240	362	878	29	71

Table 19

Number of RFGs in which Performance Problems in Categories of Pulse, Precision, Note Accuracy, Rhythmic Accuracy, Pattern Sequence, Phrasing, Technique, and Readiness were Observed to be Most Salient for Each Teacher

Teacher	Total Number of RFGs	Pulse	Precision	Note Accuracy	Rhythmic Accuracy	Pattern Sequence	Phrasing	Technique	Readiness
1	4	1	1	2	1	0	0	0	0
2	16	3	15	1	1	0	0	0	0
3	16	12	10	1	0	2	1	0	0
4	19	12	4	0	3	2	0	1	0
5	8	3	8	1	0	0	0	0	0
6	5	2	2	0	0	1	0	0	0
7	9	2	7	2	0	1	0	0	0
8	9	6	6	0	0	1	0	0	0
Overall	86	41	53	7	6	6	1	1	1

Note. Some RFGs were observed to have more than one salient performance problem. A total of 74 RFGs across all eight teachers contained salient problems related to either Pulse or Precision.

Table 20

Number of Trials Preceded by a Verbally Identified Teacher Target for Each Teacher

Teacher	RFGs	Group Trials	Number of Trials Preceded by A Verbally Identified Target
1	4	28	14
2	16	83	52
3	16	116	45
4	19	84	41
5	8	92	39
6	5	28	17
7	9	79	30
8	9	157	80
Overall	86	667	318

Question 3: What conditions are associated with student improvement?

After performance trials were evaluated in each instrumental part, descriptive data and transcripts in every RFG were examined to identify behaviors or events preceding student improvement. In addition to each trial's assessment, descriptive data provided information regarding any temporary improvements that may not have endured throughout the trial. For instance, an ensemble that played with extremely poor precision throughout the majority of a trial would have received a negative evaluation. However, descriptive data within the evaluation might have included information showing that precision improved for a few seconds when the teacher clapped the part, but then became even worse after the teacher stopped clapping. Although the trial would have received a negative evaluation, descriptive data would have documented the temporary improvement made during teacher modeling.

Once behaviors were identified, observations were recorded at the end of each transcript. Any conditions surrounding student improvement were noted. In several instances, multiple conditions were observed before a single improvement. For example, a single observation of improved precision might be associated with the following conditions: (1) an explicit teacher target, (2) a clear cue, (3) teacher modeling during performance, and (4) short trial length. In such a scenario, each condition would be recorded.

Table 21 shows that within 1,240 assessments, 266 instances of student improvement were identified, representing an overall 21% rate of student improvement. Verbalized teacher targets preceded only 39% of these 266 observations. This rather low

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percentage may not be too surprising, considering how infrequently teachers verbally identified targets before performance trials (48% of 667 trials). The majority of conditions associated with student improvement (62%) were due to factors other than teacher target identification.

Table 22 provides a breakdown of these conditions. The largest category of conditions associated with student improvement (other than teacher targets) was labeled "Unexplained/Repetition." Because these performance trials were preceded with nothing other than procedural directives, it is difficult to determine exactly why students improved other than the fact that they had the chance to practice a passage again. Other variables that could not be detected may have played a role in student improvement.

Modeling During Performance accounted for the next largest category associated with student improvement, followed by Shorter Trials and Unrelated Directives. Unrelated Directives referred to teacher instruction in one category that resulted in improvement in another category. For instance, at times teachers told students to play softer. As a result, pulse and precision improved. Yet, the verbalized directive was actually related to dynamics rather than pulse or precision.

Other conditions preceding student improvement included Improved Cues, Positive Modeling, and Student Readiness, each representing roughly 7-8% of all conditions observed. Conditions preceding student improvement each observed 10 times or less were collapsed into a category labeled "Other."

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Table 21

Frequency and Percentage of Observed Improvements in Student Performance Preceded by Teacher Targets for Each Teacher

Teacher	Frequency of Observed Improvements	Frequency of Targets Associated with Student Improvement	Frequency of All Conditions Associated with Student Improvement	Percentage of Teacher Targets Preceding Student Improvement	Percentage of Conditions other than Teacher Targets Associated with Student Improvement
1	15	9	15	60	40
2	33	17	37	46	54
3	51	14	53	26	74
4	58	26	63	41	59
5	14	9	17	53	47
6	5	5	5	100	0
7	38	11	40	28	72
8	52	20	57	35	65
Overall	266	111	287	39	62

Table 22

Frequency and Percentage of Conditions Other Than Teacher Targets That Were Associated with Student Improvement Across all RFGs and Frequency of Resulting Improvements by Category

Frequency and Percentage of Conditions			Frequency of Observed Improvement by Category					
Condition	Frequency	%	Note Accuracy	Pattern Sequence	Precision	Pulse	Rhythmic Accuracy	Technique
Unexplained/Repetition	53	30	6	5	21	18	3	1
Modeling During Performance	28	16	4	3	11	13	6	0
Shorter Trial Length	15	9	0	1	2	11	1	0
Readiness	14	8	0	1	12	1	0	0
Improved Cue	13	7	0	1	10	2	0	0
Unrelated Directives	12	7	0	0	5	6	1	0

(Table 22 continued)

Frequency and Percentage of Conditions			Frequency of Observed Improvement by Category					
Condition	Frequency	%	Note Accuracy	Pattern Sequence	Precision	Pulse	Rhythmic Accuracy	Technique
Positive Modeling Between Trials	12	7	4	0	5	2	1	0
Other	29	16	0	4	18	6	1	0
Overall	176	100	14	15	84	59	13	1

Note. The category labeled "Other" refers to conditions each observed less than 10 times. These conditions appeared in the following categories: Adding or Removing an Instrumental Part, Drawing Attention to One Section, Fewer Students on a Part, New Student on a Part, Teacher Pointing to Correct Bars, Student Concentration, Students Practicing Alone, Teacher Targets to Other Groups, Tempo Changes, Singing Louder while Playing, and Technique Change.

Question 4: What targets do teachers identify, and how often do students achieve these targets in subsequent performance trials?

Evaluating student performance irrespective of teacher targets provided information about student improvement that may or may not be related to teachers' verbalized performance goals. Yet this procedure did not reflect whether students were actually able to do what teachers asked them to do. For this reason, teacher targets were identified from RFG transcripts, and students' ability to achieve these targets was evaluated in subsequent performance. A total of 19 target categories emerged between and during trials. Table 23 provides examples of target categories. Table 24 illustrates that teachers identified a total of 622 targets between and during trials and provides a breakdown of frequencies and percentages by category. In many cases, teachers identified more than one target before a single group trial.

Although Pulse and Precision were the most prevalent performance problems observed in most RFGs, Technique made up the largest category of teacher targets, representing about 25% of all identified performance goals. Pulse and Precision represented just 17.2% and 5.6% of all teacher targets, respectively. Not surprisingly, 84% of Pulse targets addressed problems related to rushing.

Table 25 indicates the number of RFGs in which each target appeared for each teacher, and Table 26 shows how often each teacher identified major targets. As seen in Table 26, Precision targets were identified just 35 times. Even more striking is the fact that Teacher 2 identified almost half of these targets. Most other teachers identified Precision fewer than 5 times across all RFGs.

Table 23

Examples of Target Categories

Accent	"More emphasis on beat 1"
Balance	"When the melody comes in, the basses need to play softer."
Dynamics	"Softer"
Group Independence	"Try to play it three times without me shouting out instructions."
Moving Mouth to Text	"Let me see you mouth the words as you play."
Note Accuracy	"You're playing high D. You need to play low D."
Partial Participation	"That part is difficult. If you can't play it easily, you can leave out the left hand during that section."
Pattern Sequence	Targets related to the form of the piece or the order in which instruments make an entrance
Precision	"Play together."
Pulse	"Don't rush."
	"Make sure your eighth notes are even."
Readiness	"I won't start until I see everyone ready to play."
Relaxation	"Relax. Breathe."
Rhythmic Accuracy	Targets related to playing incorrect rhythms
Singing	"Sing the names of the notes while you play your xylophones."
Speech Inflection	"When you chant the text to the hand drum part, can you put more highs and lows in your voice to make it more interesting?"
Technique	"Keep your mallets closer to the bars."
	"Gently"
	"Elbows out"
	"Bounce off the bars."
	"Loosen up your wrists."
Tempo	"Let's try playing the piece at a faster speed."
Tone	"The basses sound angry! Can you make a nice bell-like sound?"
Watching Teacher	"Watch me."

Table 24

Total Target Data (N = 622)

Target Type	Frequency		Percent	
Technique	154		24.8	
Pulse	107		17.2	
Rushing		90		14.5
Dragging		12		1.9
Evenness		5		.8
Note Accuracy	79		12.7	
Dynamics	75		12.1	
Soft or Softer		64		10.3
Loud or Louder		8		1.3
Crescendo		3		.5
Pattern Sequence	52		8.4	
Precision	35		5.6	
Watching Teacher	25		4.0	
Tempo	20		3.2	
Rhythmic Accuracy	18		2.9	
Balance	13		2.1	

(Table 24 continues)

(Table 24 continued)

Target Type	Frequency	Percent
Readiness	11	1.8
Singing	10	1.6
Other	23	3.7

Note. The category "Other" refers to the collection of targets identified less than 10 times across all RFGs. These targets included Relaxation, Speech Inflection, Tone, Accent, Partial Participation, Group Independence, and Moving Mouth to Text.

Table 25

Number of RFGs in which Major Target Categories Appeared for Each Teacher

Targets Identified		Teachers							
Targets	Total	1	2	3	4	5	6	7	8
Technique	49	1	8	11	7	9	1	3	9
Pulse	40	1	6	6	11	7	0	1	8
Note Accuracy	36	3	7	4	8	2	1	7	4
Pattern Sequence	34	1	6	6	8	3	2	5	3
Dynamics	33	2	4	11	3	2	3	3	5
Precision	24	1	8	2	4	1	0	2	6
Tempo	16	1	0	4	5	1	0	3	2
Readiness	10	0	4	4	2	0	0	0	0

Note. Targets appearing in less than 10 RFGs are not listed individually, but include the following categories: Rhythmic Accuracy, Relaxation, Watching Teacher, Balance, Speech Inflection, Accent, Partial Participation, Tone, Moving Mouth to Text, Group Independence, and Singing.

Table 26

Frequency with which Each Teacher Identified Targets

Targets Identified		Teachers							
Targets	Total	1	2	3	4	5	6	7	8
Technique	154	1	29	29	12	38	2	5	38
Pulse	107	1	11	12	32	20	0	2	29
Note Accuracy	79	6	12	13	22	3	1	14	8
Dynamics	75	3	5	29	11	4	7	6	10
Pattern Sequence	52	1	7	11	12	4	4	6	7
Precision	35	1	17	2	4	1	0	2	8
Watching Teacher	25	0	0	0	0	22	0	0	3
Tempo	20	1	0	5	5	1	0	5	3
Rhythmic Accuracy	18	3	0	3	1	0	6	1	4
Balance	13	0	1	10	0	0	0	2	0

(Table 26 continued)

Targets Identified		Teachers							
Targets	Total	1	2	3	4	5	6	7	8
Readiness	11	0	5	4	2	0	0	0	0
Singing	10	0	0	0	0	0	0	0	10

Note. Targets identified less than 10 times across all teachers are not listed individually, but included the following categories: Relaxation, Speech Inflection, Tone, Accent, Partial Participation, Group Independence, and Moving Mouth to Text.

After locating teacher targets, students' ability to meet performance goals was evaluated. If teachers identified a target between trials, student performance was evaluated in the immediately subsequent trial. If teachers identified targets during a trial, student performance was evaluated during the trial. Eleven percent of identified targets could not be evaluated due to audio or visual problems.

Table 27 shows that when teachers identified targets between trials, students demonstrated a 63% success rate in subsequent trials. Students were more successful than unsuccessful in almost every target category. Under the Pulse category, students demonstrated a 50/50 success rate. Among the six most frequently identified targets between trials (Technique, Note Accuracy, Pulse, Pattern Sequence, Precision, and Dynamics), Technique, Pattern Sequence, and Precision, had the highest success rates at 65% or higher.

When teachers identified targets during trials, student demonstrated a 74% success rate. As noted with targets identified between trials, students were more successful than unsuccessful in almost every category. Categories of Pulse and Tempo demonstrated a 50/50 success rate. The four most frequently identified targets during trials (Technique, Note Accuracy, Pulse, and Dynamics) were each followed with a student success rate over 65%.

Table 27

Teacher Targets Evaluated Between and During Trials: Frequency and Percentage of Student Success

	Between Trials				During Trials			
Targets	Frequency Successful	Frequency Unsuccessful	Percentage Successful	Percentage Unsuccessful	Frequency Successful	Frequency Unsuccessful	Percentage Successful	Percentage Unsuccessful
Technique	60	33	65	35	26	10	72	28
Pulse	29	29	50	50	30	15	67	33
Pattern Sequence	29	12	71	29	3	3	50	50
Note Accuracy	27	16	63	37	29	6	83	17
Precision	22	12	65	35	1	0	100	0
Dynamics	17	13	57	43	28	14	67	33
Tempo	13	5	72	28	1	1	50	50

(Table 27 continued)

	Between Trials				During Trials			
Targets	Frequency Successful	Frequency Unsuccessful	Percentage Successful	Percentage Unsuccessful	Frequency Successful	Frequency Unsuccessful	Percentage Successful	Percentage Unsuccessful
Rhythmic Accuracy	10	6	63	38	2	0	100	0
Other	22	8	73	27	18	2	90	10
Overall	229	134	63	37	138	51	74	26

Note. The category "Other" refers to the collection of targets each identified less than 10 times between trials. These targets included the following: Balance, Speech Inflection, Readiness, Singing, Tone, Accent, Group Independence, Partial Participation, and Watching Teacher.

Teacher Behaviors During Target Identification Between Trials

Further scrutiny of frequently identified teacher targets between trials revealed

that teacher behaviors during target identification sometimes affected student success.

Major target categories examined were Precision, Pulse, Rhythmic Accuracy, Tempo,

Note Accuracy, Dynamics, Pattern Sequence, and Technique. Although teachers

exhibited a variety of verbal and nonverbal behaviors during target identification, some

behaviors appeared more frequently than others and were chosen for further analysis.

Accordingly, teacher behaviors were examined according to the frequency with which

teachers utilized Explicit Directives, Specific Negative Feedback, and Positive Modeling.

During analysis, it became apparent that specific directives varied in their

function. Some were more explicitly related to the task at hand than others. For instance,

in an effort to keep students from rushing the pulse, a teacher might give the specific

directive, "Focus." Although focusing may be an important part of controlling the pulse,

the directive itself is related more to concentration. Conversely, the teacher might give

the specific directive, "Don't rush." This directive is explicitly related to pulse. Thus,

Explicit Directives identified in this analysis were only those explicitly addressing the

target goal.

Table 28 demonstrates that, overall, the percentage of Explicit Directives

preceding successful student trials (68%) was higher than the percentage of Explicit

Directives preceding unsuccessful student trials (50%).   Especially notable were results

found in categories of Precision, Pulse, and Note Accuracy with percentage differences of

22%, 42%, and 33%, respectively.

Table 29 shows that the overall percentage of Specific Negative Feedback preceding successful student performance (21%) was slightly lower that the percentage of Specific Negative Feedback preceding unsuccessful performance (25%). While most differences were under 15%, Rhythmic Accuracy showed a difference of 20%.

An examination of Positive Modeling, as seen in Table 30, reveals a higher percentage of Positive Modeling preceding successful student performance (43%) than unsuccessful performance (30%). In many target categories, percentage differences favoring Positive Modeling were often about 20%.

Finally, Table 31 reveals that Explicit Directives in combination with other behaviors (including Feedback, Modeling, Questioning, and Information statements) preceded successful student performance (38%) more frequently than unsuccessful performance (20%).

Table 28

Frequency and Percentage of Explicit Directives Between Trials Preceding Successful and Unsuccessful Student Performance

Target	Total Successful Trials	Frequency of Explicit Directives Preceding Successful Trials	Percentage of Explicit Directives Preceding Successful Trials	Total Unsuccessful Trials	Frequency of Explicit Directives Preceding Unsuccessful Trials	Percentage of Explicit Directives Preceding Unsuccessful Trials
Precision	22	12	55	12	4	33
Pulse	29	17	59	29	5	17
Rhythmic Accuracy	10	4	40	6	2	33
Tempo	13	10	77	5	3	60
Note Accuracy	27	16	52	16	3	19
Dynamics	17	13	76	13	8	62
Pattern Sequence	29	17	59	12	7	58
Technique	60	52	87	33	31	94
Overall	207	141	68	126	63	50

Table 29

Frequency and Percentage of Specific Negative Feedback Between Trials Preceding Successful and Unsuccessful Student Performance

Target	Total Successful Trials	Frequency of Specific Negative Feedback Preceding Successful Trials	Percentage of Specific Negative Feedback Preceding Successful Trials	Total Unsuccessful Trials	Frequency of Specific Negative Feedback Preceding Unsuccessful Trials	Percentage of Specific Negative Feedback Preceding Unsuccessful Trials
Precision	22	8	36	12	5	42
Pulse	29	16	55	29	11	38
Rhythmic Accuracy	10	3	30	6	3	50
Tempo	13	0	0	5	0	0
Note Accuracy	27	2	7	16	2	13
Dynamics	17	1	6	13	1	8
Pattern Sequence	29	4	14	12	3	25
Technique	60	10	17	33	6	18
Overall	207	44	21	126	31	25

Table 30

Frequency and Percentage of Positive Modeling Between Trials Preceding Successful and Unsuccessful Student Performance

Target	Total Successful Trials	Frequency of Positive Modeling Preceding Successful Trials	Percentage of Positive Modeling Preceding Successful Trials	Total Unsuccessful Trials	Frequency of Positive Modeling Preceding Unsuccessful Trials	Percentage of Positive Modeling Preceding Unsuccessful Trials
Precision	22	4	18	12	1	8
Pulse	29	13	45	29	6	21
Rhythmic Accuracy	10	7	70	6	3	50
Tempo	13	7	54	5	4	80
Note Accuracy	27	8	30	16	7	44
Dynamics	17	3	18	13	2	15
Pattern Sequence	29	13	45	12	3	25
Technique	60	33	55	33	12	36
Overall	207	88	43	126	38	30

Table 31

Frequency and Percentage of Explicit Directives in Combination with other Behaviors (Modeling, Information, Questioning, Feedback) Between Trials Preceding Successful and Unsuccessful Student Performance

Target	Total Successful Trials	Frequency of Explicit Directives in Combination with Other Behaviors Preceding Successful Trials	Percentage of Explicit Directives in Combination with Other Behaviors Preceding Successful Trials	Total Unsuccessful Trials	Frequency of Explicit Directives in Combination with Other Behaviors Preceding Unsuccessful Trials	Percentage of Explicit Directives in Combination with Other Behaviors Preceding Unsuccessful Trials
Precision	22	4	18	12	2	17
Pulse	29	11	38	29	1	3
Rhythmic Accuracy	10	1	10	6	1	17
Tempo	13	4	31	5	1	20
Note Accuracy	27	4	15	16	1	6
Dynamics	17	4	24	13	1	8
Pattern Sequence	29	12	41	12	5	42
Technique	60	30	50	33	13	39
Overall	207	70	34	126	25	20

Summary

Eight recognized Orff Schulwerk teachers and their students were videotaped during four rehearsals in their regular settings. From these tapes, portions of rehearsal were identified in which teachers were working to improve previously learned repertoire for percussion instruments. These excerpts were then separated into Rehearsal Frame Groups (RFGs), each organized according to the instrumental group(s) with which teachers were working. Out of 22 hours 20 minutes of total rehearsal time, a total of 86 RFGs representing 6 hours 44 minutes were identified for further analysis.

Examination of teacher behaviors across all RFGs demonstrated that teachers spent approximately 37% of the time talking, 10% modeling, and 30% performing with students during performance trials. The mean duration of teacher talk between trials was 3.3 seconds, while the mean duration of teacher talk during trials was only 1.1 seconds. Directives represented the most prevalent type of verbalization and occurred at a rate of 5.4 times per minute; however, 59% of these were procedural, rather than musical, in nature. Teachers gave students positive feedback twice as often as negative feedback, with mean rates per minute of 1.1 and 0.5, respectively.

Analysis of student behaviors across all RFGs revealed that students spent approximately 50% of the time performing, with the largest proportions of this time devoted to Full Ensemble Performance (27%) or Section Performance (14%). Only about 4% of time was devoted to Related Activities in which students altered their playing in some way to simplify or support the learning process.

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Student performance was assessed irrespective of teacher targets in every instrumental part for every trial. Results derived from 1,240 evaluations revealed a 29% success rate. Most performance problems were related to Pulse and Precision. Post hoc transcript analysis revealed that only 39% of student improvement was preceded by verbalized teacher targets. Other notable conditions preceding improvement included Repetition and Modeling During Performance.

Teachers identified a total of 622 targets in 19 categories. An assessment of students' abilities to achieve these performance goals demonstrated a 63% success rate when teachers identified targets between trials and a 74% success rate when teachers identified targets during performance. Teachers most often identified targets in categories of Technique, Pulse, Note Accuracy, and Dynamics. However, teachers identified targets before less than half of all student performance trials.

Post hoc transcript analysis indicated that Explicit Directives and Positive Modeling preceded successful student performance trials more frequently than unsuccessful performance trials. Specific Negative Feedback was observed slightly more frequently before unsuccessful student performance trials than successful performance trials.

In conclusion, teachers demonstrated high pacing during verbalizations and modeling. They spent a large amount of time attending to procedural matters regarding when and where to play in the music. The most prevalent problems observed in student performance were related to Pulse and Precision; however, teachers spent more time identifying problems related to Technique. Often, teachers did not identify any musical

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targets for improvement. When they did identify targets, students usually met their

expectations. Students were most successful when teachers used Explicit Directives and

Positive Modeling during target identification.

CHAPTER FIVE

Discussion

Although many notable figures within the Orff Schulwerk movement have provided excellent materials aimed at helping teachers introduce new music to children, few if any have examined how recognized teachers refine music beyond the initial stages of note learning. The purpose of this study was to examine recognized Orff Schulwerk teachers as they worked to refine learned repertoire for percussion instruments. Final analysis included timings for teacher and student behaviors as well as assessments of student performance.

Eight recognized Orff Schulwerk teachers and their students were videotaped across four rehearsals in their regular settings. Tapes were viewed to isolate portions of rehearsal devoted to refining learned repertoire for percussion instruments. From these excerpts, Rehearsal Frame Groups (RFGs), identified by the instrumental group(s) with which teachers were working, were isolated for further analysis. A total of 86 RFGs were included in the final analysis.

Within each RFG, teacher behaviors were examined to determine proportions, rates, and durations of verbalizations, performance, and instructional sequence. Student behaviors were similarly examined in varying categories of performance and related activities. Student performance was evaluated in each instrumental part across all trials,

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irrespective of teachers' verbalized performance goals. Afterwards, performance was

evaluated according to students' ability to achieve teachers' targets. Analysis was

conducted to answer the following research questions:

1. In an Orff ensemble rehearsal, what behaviors do teachers and students exhibit

   during the rehearsal of learned repertoire for percussion instruments?

2. How often do students perform successfully?

3. What conditions are associated with student improvement?

4. What targets do teachers identify, and how often do students achieve these

   targets in subsequent performance trials?

Following a brief discussion of overall timings obtained in videotapes, results

from each question will be summarized and discussed separately.

Videotape Data

1. A total of 22 hours 20 minutes of rehearsal time was recorded across eight

   recognized Orff Schulwerk teachers.

2. Approximately 12 hours 32 minutes were devoted to rehearsing learned

   repertoire for percussion instruments. From this data, approximately 6 hours

   45 minutes were isolated for further analysis and divided into 86 RFGs.

3. The number of RFGs per teacher ranged from a few as 4 to as many as 19.

   The mean episode duration across all RFGs was 4 minutes 42 seconds,

   representing a range from 17 seconds to 16 minutes 31 seconds.

4. The mean number of group performance trials within each RFG was 7.8; however, variability was high.

A variety of factors contributed to the wide range of RFGs identified between teachers. Although all teachers initially agreed to focus on learned repertoire for percussion instruments, concert deadlines forced some teachers to include other Orff Schulwerk activities excluded for analysis in this study such as improvisation, the introduction of new materials, or practicing music for recorders, singers, or dancers. Additionally, Teacher 5 had a large class and was frequently forced to have students share instruments. Due to the difficulty of tracking student improvement across constantly changing performers, data collected during these periods of rehearsal was discarded.

Several teachers expressed discomfort rehearsing previously learned repertoire, fearing that students would become bored. In fact, two teachers devoted an entire class to introducing new materials even though they were not preparing for concerts. On one hand, their fears are well founded. Repetitive ostinati observed in many Orff arrangements can be monotonous and lead to boredom if students are allowed to play these patterns without thought. Therefore, teachers must find musical elements worthy of interest within these repetitive patterns, such as playing with precision, steady pulse, and dynamic phrasing. When students' minds are actively engaged in expressive music making, boredom might less likely be a mitigating factor.

Question 1: What behaviors do teachers and students exhibit during the rehearsal of learned repertoire for percussion instruments in an Orff ensemble rehearsal?

Teacher Behaviors Observed During Rehearsal Frame Groups RFGs

Teacher Verbalizations

1. Teachers talked during 37% of the total RFG duration.

2. Thirty-three percent of Teacher Talk occurred between student performance trials at a rate of 5.3 times per minute in mean episode durations of 3.9 seconds.

3. Four percent of Teacher Talk occurred during student performance trials at a rate of 2.3 times per minute in mean episode durations of 1.1 seconds..

4. Directives were observed at a rate of 5.4 times per minute, representing the most frequently occurring category of verbalizations.

5. Fifty-nine percent of all Directives were procedural.

6. Positive Feedback occurred 1.1 times per minute. Negative Feedback occurred less than half as often at 0.5 times per minute.

7. Feedback specificity was observed in the following proportions: General Positive (54%), Specific Negative (25%), Specific Positive (15%), and General Negative (6%).

Teacher Performance

1. Teacher Modeling occurred during 9.6% of the total RFG duration.

2. Positive Modeling accounted for 8.7% of all Teacher Modeling and occurred at a rate of 1.6 times per minute in mean durations of 3.3 seconds.

3. Negative Modeling accounted for 0.9% of all Teacher Modeling and occurred at a rate of 0.2 times per minute in mean durations of 1 second.

4. Teacher Performance during student performance trials occurred during 30% of the total RFG duration at a rate of 1.8 times per minute in mean durations of 9.9 seconds.

Teachers' Instructional Sequence

1. Teachers engaged students in Repetition almost once every minute.

2. Teachers introduced new materials or increased task difficulty approximately once every two minutes.

3. Teachers simplified previously performed tasks 0.2 times per minute.

The proportion of Teacher Talk observed in this study (37%) is consistent with examinations of experienced teachers of bands and orchestras (Blocher, Greenwood, & Shellahamer, 1997; Cavitt, 1998, Goolsby, 1996, 1999; Pontious, 1982; Sang, 1987; Single, 1990, Witt, 1986; Yarbrough & Price, 1989; Younger, 1998), choirs (Caldwell, 1980; Cox, 1986; Derby, 2001; Watkins, 1986; Yarbrough & Price, 1989), elementary general music classes (Forsythe, 1977, Moore, 1981, 1987; Moore & Bonney, 1987; Orman, 2002; Wagner & Strul, 1979; Wang & Sogin, 1997), and private instruction (Colprit, 2000; Duke, 1987; Kostka, 1984; Siebenaler, 1997), in which the amount of Teacher Talk accounts for roughly 44% of all instructional duration with variations ranging from 28% to 60%. Similarly, the high rate of Teacher Talk between student performance trials (5.3 times per minute) was comparable to rates reported in examinations of expert teachers (Buckner, 1997; Derby, 2001; Cavitt, 1998; Colprit,

2000; Younger, 1998). The mean episode duration of Teacher Talk observed in this study at 3.9 seconds was similar to findings reported by Younger (1998), yet shorter than the 5-7 second durations reported in other studies of expert teachers (Buckner, 1997; Derby, 2001; Cavitt, 1998; Colprit, 2000).

These findings illustrate that teachers in this study demonstrated high pacing by talking frequently in short durations, leaving ample time for student performance. Although examinations of expert teachers demonstrate that high pacing often correlates with success (Buckner, 1997; Cavitt, 1998; Colprit, 2000; Siebenaler, 1997; Younger, 1998), results in this study demonstrate that high pacing does not ensure success. Although high pacing may be an important variable in effective teaching, the content of teacher verbalizations may be more important than the rate of delivery.

Even though Directives in this study occurred 5.4 times per minute, representing the most frequent category of verbalization, 59% of these statements were procedural rather than musical. The majority of Teacher Talk was spent reminding students about who played and when rather than instructing them how to actually improve performance.

The prevalence of Positive Feedback (second in frequency only to Directives) is consistent with findings in other studies of elementary music instruction (Hendel, 1995; Kostka, 1984; Moore, 1981; Moore & Bonney, 1987; Wagner & Strul, 1979; Wang & Sogin, 1997; Yarbrough & Price, 1989) and applied lessons (Colprit, 2000; Siebenaler, 1997). Teachers in the present study frequently made academic approval mistakes, praising children when their performance was poor. Although Negative Feedback

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occurred less than half as often as Positive Feedback, it was usually specific and directly related to teacher targets.

The preponderance of Positive Feedback over Negative Feedback noted in this study and the studies cited above was not observed in examinations of expert ensemble directors (Cavitt 1998; Derby; 2001; Pontious, 1982; Younger, 1998) or in Buckner's study of expert piano teachers (1997). In these studies, Negative Feedback was observed more frequently than Positive Feedback.

The lack of Negative Feedback and musical Directives in this study is reflected in the paucity of teacher targets identified between student performance trials. Without instruction, student improvement is often left to chance as was observed in the 29% overall success rate across all student trials. When teachers identified targets through explicit musical directives and specific negative feedback, students experienced a 63% success rate, indicating that a higher frequency of teacher targets might have resulted in an overall higher success rate.

The proportion of Modeling (10%) observed during the duration of RFGs in this study is comparable to reports of modeling alone in elementary classrooms (Orman, 2002) and private piano lessons (Buckner, 1997; Siebenaler, 1997), yet higher than the 6-7% proportions reported in bands (Cavitt, 1998; Younger, 1998), and choirs (Derby, 2001). Teachers in this study engaged in Positive Modeling eight times more frequently than Negative Modeling, a figure comparable to those found among expert band directors (Cavitt, 1998), yet higher than the 3-1 ratio observed by Derby (2001).

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All teachers in this study displayed high levels of musicianship as they modeled for their students. Teacher 6 demonstrated superb multi-tasking capabilities. At times, this instructor was observed simultaneously playing recorder with both hands, maintaining a steady beat with the left foot, and cueing student entrances with the right foot. As noted in chapter 2, student performance is higher among teachers with good modeling skills (Sang, 1987; Siebenaler, 1997), and modeling can sometimes improve student performance more readily than verbalized instructions (Dickey, 1991; Rosenthal, 1984; Sang, 1985).

Teachers in this study frequently provided good positive models for their students, yet unlike the studies mentioned above, overall student success was minimal. This discrepancy may be due to the function of modeling observed among Orff Schulwerk teachers. Frequently, modeling served to remind students which notes should be played rather than how to play them differently. Like procedural directives that merely indicated who should play and when, much Positive Modeling observed in this study had no real musical function. Episodes of Modeling that did function musically were often related to technique, such as bouncing off the bars or holding mallets properly. Although these demonstrations sometimes improved technique, they did not address the more pressing issues of pulse and precision, so sorely lacking in the overall evaluation of student performance.

Although Modeling between student performance trials accounted for approximately 10% of the duration of all RFGs, Teacher Performance during student performance trials accounted for 30% of the duration of all RFGs, representing the

second most frequently observed category of teacher behaviors (second only to Teacher Talk). Results indicated that across all ensembles, Teacher Performance occurred almost 2 times per minute in mean durations of about 10 seconds per episode. Teacher Performance occurred in several ways. Most often, teachers sang or chanted text for short durations. If a student experienced difficulty playing a barred instrument, teachers sometimes approached the instrument from the opposite side (facing the student) and played the bars with their fingers to provide support. At times, teachers performed with students throughout entire performance trials. In many of these cases, teachers played nonpitched percussion instruments throughout the trial to provide a steady beat. Teacher 4 frequently provided the steady beat through guitar accompaniment.

The 30% incidence of Teacher Performance during student performance trials in this study is much higher than the mere 6% figure reported in a study of expert elementary choral teachers (Derby, 2001). Reasons for the discrepancy are not completely clear. When teachers played the steady beat through a trial, it appeared that they were trying to prevent students from rushing the pulse. Because students were usually playing faster values than those audible in the steady beat, this instructional strategy was most often unsuccessful. Teacher 2 was the only instructor to provide a divided beat (in eighth notes rather than quarter notes, assuming a 4/4 time signature), which seemed to be more effective in helping students avoid rushing.

When students executed patterns incorrectly during performance trials, such as playing during a rest, teachers were frequently able to correct the problem by singing or chanting the part, thus providing a correct model. Importantly, student improvement

under these circumstances was usually short-lived. As soon as the teacher moved on to help other sections, students reverted to old habits. Although they seemed to know what the pattern was, they were not secure enough to play it independently. Teacher 4 frequently used this strategy to help correct performance problems during trials but often moved from section to section trying to "put out fires" as students failed to perform with independence. This type of teaching could be classified as reactive, rather than proactive.

An examination of teachers' Instructional Sequence demonstrates a low incidence of Backward episodes in which teachers modified difficult tasks to make them easier. Much more often, teachers introduced a new task, repeated it, or increased complexity. A higher incidence of Repetition and Forward episodes is congruent with findings cited in studies of expert piano teachers (Siebenaler, 1997) and nonmajor college music students engaged in guitar instruction (Duke & Madsen, 1991). Although the frequency of Backward episodes was low (0.2 times per minute), teachers often introduced new tasks in decontextualized form. Further decontextualization would have been impractical. Many trials classified as Repetition episodes were cases in which teachers kept repeating simple tasks in hopes of facilitating improvement. Yet although students often practiced phrases repeatedly in decontextualized form, their overall success rate was low. Low success rates could be attributed in part to having all students play the same part, regardless of ability.

Some Orff Schulwerk teachers, including several in this study, introduce music by teaching all parts to all students. Although they understand that some students will not be able to play difficult parts, they reserve specific instrument assignments until a later date

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after everyone has been given a chance to learn. As egalitarian as this approach may seem, it can actually demoralize students with low abilities. In this study, some students who were obviously struggling appeared embarrassed and frustrated next to their more capable peers.

In order to avoid these problems, teachers might consider assigning parts according to student ability in the beginning of the learning process. This is not to imply that teachers should assign uninteresting parts to the least able students. Alternatively, teachers can assign socially valued instruments that often play easy parts, such as gongs or bass drums, to students who are not yet capable of mastering more difficult parts. Additionally, applying the compositional skills learned in Orff Schulwerk certification courses, teachers could write pieces with specific student abilities in mind or modify existing pieces to provide simple, yet musically interesting parts for students with lesser skills. Students with limited abilities should be challenged, but the challenges should be reasonable so that all may be successful.

Student Performance Observed During Rehearsal Frame Groups (RFGs)

1. Students performed during 50% of the total duration of RFGs.

2. Full Ensemble Performance and Section Performance accounted for 30% and 14%, respectively, of the total duration of all RFGs. Individual Ensemble Performance accounted for just 4% of student activity.

3. Students spent less than 5% of performance time engaged in Related Activities, with 4.1% of these occurring as a complete ensemble.

4. The mean rate per minute of Full Ensemble Performance was 0.9; the mean rate per minute of Section Performance was 0.6, and the mean rate per minute of Individual Performance was 0.4. The mean rate per minute for Full Ensemble Related Activities was 0.2; the mean rate per minute for Section Related Activities was 0.01, and the mean rate per minute for Individual Related Activities was 0.002.

5. The mean episode duration for Full Ensemble Performance was approximately 25 seconds; the mean episode duration for Section Performance was approximately 14.2 seconds, and the mean episode duration for Individual Performance was approximately 5 seconds. The mean episode duration for Full Ensemble Related Activities was approximately 8 seconds; the mean episode duration for Section Related Activities was approximately 6 seconds, and the mean episode duration for Individual Related Activities was 4 seconds. Standard deviations were higher than the mean in categories of Full Ensemble Performance and Related Activities.

The overall proportion of Student Performance observed across all RFGs was comparable to proportions noted in other studies of bands (Cavitt, 1998; Goolsby, 1996, 1999; Pontious 1982; Sang, 1987; Single, 1990; Witt, 1986; Yarbrough & Price, 1989; Younger, 1998), choirs (Caldwell, 1980; Cox, 1986; Derby, 2001; Watkins, 1986; Yarbrough & Price, 1989), elementary classrooms (Forsythe, 1977; Moore, 1981; Moore, 1987; Moore & Bonney, 1987; Orman, 2002, Wagner & Strul, 1979; Wang & Sogin, 1997), and applied lessons (Buckner, 1997; Colprit, 2000; Duke, 1987; Kostka, 1984;

Siebenaler, 1997). As observed in most ensemble studies, students spent the vast majority of time engaged in Full Ensemble Performance, and less time in Sectional or Individual Performance.

The mean episode duration for Full Ensemble Performance was 25.4 seconds, which was comparable to results found among choirs conducted by expert teachers (Derby, 2001) but considerably higher than the 15 second duration reported for bands with expert directors (Cavitt, 1998). The 0.9 rate per minute is consistent with rates reported by both Derby and Cavitt.

The mean episode duration for Section Ensemble Performance was 14.2 seconds, which was noticeably higher than the 4.3 seconds observed by Derby (2001) or the 5.73 seconds observed by Cavitt (1998). The 0.6 per minute rate of occurrence was also noted among Derby's choir students, yet considerably lower than the 1.91 rate among Cavitt's band students.

The mean episode duration of 6.2 seconds for Individual Performance was higher than the 0.1 seconds reported by Derby (2001) and the 1.02 seconds reported by Cavitt (1998). The mean rate of occurrence per minute for Individual Performance was 0.4, less than the 1.26 reported by Cavitt, but more than the 0.03 reported by Derby.

The mean episode duration of 25.4 seconds during Full Ensemble Performance noted in this study seemed excessive for the unique repetitive tasks inherent in music for Orff ensembles. At times, students working to improve ostinati were successful for the first 10 or 15 seconds, but as repetitions continued, they often seemed to lose concentration and began reverting to incorrect playing habits. As mentioned in chapter 4,

raw data show that some student performance trials lasted over two minutes. During

many lengthy trials, teachers shouted out directives or began performing with students in

an attempt to improve student performance. Although these strategies often resulted in

temporarily improved performance, they allowed students to practice bad habits too long.

The following hypothetical chain of events is representative of a typical sequence:

1. Bass xylophones begin to play an ostinato with ease.
2. Alto xylophones add another ostinato, at which point the basses begin to rush, thereby creating precision problems,
3. After several measures in which precision gets worse and worse, the teacher begins chanting and clapping the bass part to help them get back on track.
4. Soprano xylophones add a melody, at which point the alto xylophones begin dragging the pulse.
5. The teacher begins singing the alto part, but the basses begin rushing. The teacher shouts to the basses, "Don't rush!" but remains with the altos, who are having worse problems.
6. After the altos seem secure, the teacher rushes over to the basses and begins chanting their part, at which point the altos revert to old habits.
7. Some soprano xylophone players begin rushing, while others maintain the pulse.
8. The ensemble falls apart due to lack of precision.

This scenario results in the teacher constantly trying to "put out fires" rather than

isolating problem areas and working to build student independence through shorter

episodes of sectional work. Conversely, teachers dedicated over twice as much time to

Full Ensemble Performance as to Section Performance.

Although shorter episodes may facilitate more opportunities for student

improvement, they do not ensure success. Teacher 8 engaged students in Full Ensemble

Performance in mean episode durations of just 9.3 seconds at a rate approaching two

times per minute. Coupled with high rates of verbalization, this teacher demonstrated

high paced teaching and was obviously working hard to identify problems and improve

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student performance. Yet students' success rate, irrespective of teacher targets, was just 37%. As mentioned earlier, directives must be musically oriented, rather than merely procedural. However, musical directives and feedback must properly diagnose the problem. Although Teacher 8 worked tenaciously to improve student performance, at times s/he incorrectly diagnosed the problem or failed to identify the root cause of student inaccuracy. For instance, if students rushed a passage in two places, it was sometimes obvious that the first rushing error influenced continued rushing later in the phrase. Rather than concentrating on the first error, the core root of the problem, the teacher focused on the second error. When the second area was isolated, students made improvement. However, when the passage was recontextualized back into the phrase, the first problem area remained untouched and continued to affect student performance negatively in subsequent performance trials

Related Activities usually occurred as a full ensemble and appeared in a variety of ways. Commonly, students played barred instruments with their fingers at the beginning of an RFG, while reviewing note and pattern sequences. Another frequent form of Related Activities was singing or chanting note names while playing barred instruments. Less frequently, students performed parts by clapping, patting, stomping, or snapping.

Question 2: How often do students perform successfully?

Across 86 RFGs, students performed a total of 667 group trials. Instrumental parts were evaluated individually within each trial resulting in a total of 1,240 separate assessments. Because a pilot study showed that teachers frequently failed to identify

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targets between performance trials, evaluations were conducted irrespective of verbally identified teacher targets. After evaluations were completed, the most salient problems noted during trials were recorded for each RFG. Results demonstrated the following:

1. Students demonstrated a 29% success rate across all 1,240 performance trial evaluations.

2. Pulse, Precision, or a combination of each was the most salient performance problem in 74 out of 86 RFGs.

3. Phrasing, Technique, and Readiness were each identified only once as the most salient problems within RFGs.

The low rate of student success observed in this study is attributable to a variety of factors, not the least of which is the inherent difficulty of performing music written for Orff ensembles. Although many people may perceive Orff ensemble performance to be relatively simple, nothing could be further from the truth. The capability of removing bars from xylophones and metallophones provides instant success during pentatonic improvisatory pieces; however, these alterations do not begin to compensate for the challenges of playing multiple percussion parts with precision. Even the simplest pieces often contain at least one underlying ostinato part. Playing repetitive ostinati with appropriate pulse control and precision can be a mind-numbing task, demanding students' utmost concentration. Many adults might have difficulty maintaining necessary levels of concentration, not to mention children with shorter attention spans.

Even in parts with less frequent repetition, playing percussion instruments with precision is still difficult. Many percussion instruments' sounds are characterized by

strong attacks with relatively short durations of reverberation. If the initial attack is not played together, there is little to no resonance afterward to draw the listeners' attention, thereby masking the problem. Furthermore, unlike wind players or singers, the breath does not serve as a rhythmically unifying cue among percussionists. Thus, the intuitive aspect of breathing together so inherent in bands in choirs is normally absent in Orff ensemble settings.

Some of the motor skills required to play in an Orff ensemble may present unique problems for students, depending on their age and development. At the present time, there is a lack of research examining the effect of age on children's ability to perform motor skills typically found in Orff ensemble arrangements. Of course, motor skills differ between students according to a variety of biological and environmental factors. Yet, it would be helpful to understand which skills the majority of upper-elementary students could perform with success.

Motor development during the elementary school years is often referred to as the "sport skill phase." During this period, fundamental movement skills acquired during early childhood are refined and developed through practice (Gabbard, 2000). Many motor learning studies have been conducted examining the effects of varying practice schedules on skill acquisition in fine and gross motor activities. Future research examining these strategies within an elementary Orff ensemble could provide valuable information regarding rehearsal techniques.

Question 3: What conditions are associated with student improvement?

1. Only 21% of 1,240 evaluations across every trial in each instrumental part represented improvement from a previously unsuccessful trial.

2. Teachers verbally identified targets before roughly half of all group student performance trials.

3. Teacher targets preceded just 39% of all student improvements.

4. Repetition/Unexplained represented 30% of all conditions unrelated to teacher targets that were associated with student improvement.

5. Modeling During Performance represented 16% of all conditions unrelated to teacher targets that were associated with student improvement. Positive Modeling Between Trials , Shorter Trial Length, Unrelated Directives, Improved Teacher Cues, and Student Readiness each represented between 7% and 9% of all observed conditions unrelated to teacher targets associated with student improvement.

Considering how infrequently teachers identified targets between trials, it is not surprising that only 21% of evaluations across all instrumental parts represented improvement from a previous trial and that 39% of these improvements appeared to be due to teacher intervention. Between roughly half of all student performance trials, improvement was left up to chance.

Trials in which student improvement was not preceded by any observable teacher interventions or environmental changes were assumed to have resulted from Repetition

alone. Although Repetition represented the largest category of conditions other than teacher targets associated with student improvement, it only accounted for 53 of the 287 observations of student improvement. Controlled studies examining the effects of Repetition would be useful to determine under what conditions students could most readily succeed by practicing alone without teacher intervention.

The beneficial effects of Positive Modeling observed in this study were consistent with previous studies of instrumental modeling by Dickey (1991), Hewitt (2001), Rosenthal (1984), Rosenthal, Wilson, Evans, & Greenwalt (1988), and Sang (1985). Positive Modeling During Performance accounted for the second largest category of conditions other than teacher targets that were associated with student improvement. Although this intervention proved effective, it was often short-lived. Students frequently reverted to old habits after teachers stopped performing with them. Positive Modeling Between Trials was noted as the only condition preceding student improvement on 15 separate occasions. This relatively small *n* does not necessarily demonstrate that this is the most effective method of instruction in Orff ensemble rehearsals. Most modeling in this study occurred in combination with other teacher behaviors, which will be discussed in later sections of this chapter describing teacher targets.

As discussed earlier, many trials were relatively long, considering the repetitive nature of ostinati inherent in many pieces written for Orff ensembles. This study documented 12 cases in which shorter trial length appeared to be responsible for student improvement. During shorter trials, students seemed less likely to lose concentration when practicing new or difficult performance skills.

Engaging students in short trials utilizes a proactive teaching strategy in which opportunity for failure is minimized. The more frequently students can practice difficult passages with accuracy, the less likely bad habits may be ingrained into motor muscle memory. As students experience success and gain confidence, short trials can be gradually extended to longer trials until the final desired length is attained. Future research examining children's concentration span throughout varying trial lengths and performance tasks could provide valuable insight regarding effective rehearsal strategies that could maximize the effects of pacing.

Interestingly, this study found that teacher directives in one category sometimes resulted in improved performance in another category. For example, Teacher 2 directed students to chant the notes while playing, which resulted in improved precision and note accuracy. Likewise, Teacher 3 directed students to play lighter, which resulted in better pulse control. Of course, student improvement may have been due to receiving any type of attention from the teacher, rather than the actual directive itself. Further research examining possible relationships between directives and unrelated target categories might help provide insight regarding the interactive effects of varying types of instruction on student achievement.

In several trials, improved student performance seemed clearly related to the clarity with which teachers cued entrances. At times, verbal cues were superior to nonverbal cues. Although Teachers 5 and 8 were committed to teaching students to follow conducting gestures, their occasional use of verbal cues were sometimes helpful for students struggling with issues related to Pulse or Precision. Of course, verbal cues

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must be given within the context of the appropriate pulse. Surprisingly, Teacher 7 sometimes verbally cued students without a rhythmic context. Rather than saying, "One, two, ready, go," in the appropriate tempo, the teacher just said, "Go!" with no reference to underlying pulse. Not surprisingly, students did not know when to come in, and precision was quite poor.

The last noteworthy category of conditions unrelated to teacher targets associated with student improvement was Student Readiness. At times, teachers appeared to be unaware that they had cued students to play before everyone was in correct playing position. Although no targets were identified, students sometimes improved merely due to better playing position.

Question 4: What targets do teachers identify, and how often do students achieve these targets in subsequent performance trials?

Teacher Targets Identified During Rehearsal Frame Groups (RFGs)

1. Nineteen target categories emerged from 622 teacher targets identified between and during student performance trials across 86 RFGs. Seventy targets, representing 11% of all targets between and during trials, could not be evaluated due to audio or visual problems.

2. Technique, Pulse, Note Accuracy, and Dynamics were the most frequently identified target categories between and during student performance trials, accounting for approximately 25%, 17%, 13%, and 12% of all teacher targets, respectively.

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3. Eighty-four percent of Pulse targets addressed rushing. Eighty-five percent of Dynamics targets addressed playing softly.

4. Precision accounted for just 5.6% of all targets identified between and during student performance trials. One teacher identified almost half of these targets.

5. Accent, Partial Participation, Group Independence, and Moving Mouth to Text were the least frequently identified teacher targets between and during student performance trials.

The prevalence of Technique targets observed in this study is similar to results reported by Colprit (2000), in which technique targets among expert Suzuki teachers accounted for 40% of all identified performance goals. The emphasis on Pulse and Dynamics seen in this study is mirrored by the importance of rhythm and dynamics reported in studies of band directors (Carpenter, 1988; Cavitt, 1998; Goolsby, 1997). The weight given to Note Accuracy, while not observed in other studies, probably reflects the rote learning process inherent in most Orff ensembles.

Importantly, Pulse and Precision, the categories most often evaluated negatively in student performance assessments irrespective of teacher targets, accounted for just 17% and 6% of all teacher targets, respectively.

An examination of raw data showed that Group Independence was clearly articulated as a performance goal only one time by one teacher across all RFGs. Considering the important role independence plays in successful Orff ensemble performance, it is surprising how infrequently this target was identified. Conversely,

teachers spent about 30% the duration of all RFGs performing with their students, rather than actively working to foster their independence.

Assessment of Student Performance Relative to Teacher Targets

1. When teachers identified targets between trials, students demonstrated a 63% success rate in subsequent trials.

2. When teacher identified targets during trials, students demonstrated a 74% success rate.

3. Among the six most frequently identified targets evaluated between trials (Technique, Note Accuracy, pulse, Pattern Sequence, Precision, and Dynamics), students demonstrated a success rate of 65% of higher in categories of Technique, Pattern Sequence, and Precision.

4. The four most frequently identified targets evaluated during trials (Technique, Note Accuracy, Pulse, and Dynamics) were each followed with a student success rate over 65%.

Students were more successful than unsuccessful performing teacher targets. Results indicate a large discrepancy between the 63-74% success rate related to targets and the 29% success rate documented in evaluations of student performance irrespective of teacher targets. An examination regarding the most salient performance problems and nature of teacher targets helps explain this discrepancy.

As noted earlier, the most salient performance problems noted in student performance, irrespective of targets, concerned Pulse and Precision. Most of the time,

students were not playing together, and the problem often stemmed from rushing the underlying pulse. Although Pulse and Precision were two of the six most frequently identified targets, these categories only represented 17.2% and 5.6%, respectively, of all evaluated targets identified across all RFGs. Consider also that these figures are derived only from identified targets and that teachers failed to identify any targets between roughly half of all student performance trials. Target identification was already minimal; thus, in the context of the entire duration of RFGs, the incidence of Pulse and Precision identification was quite infrequent.

Technique, the most frequently identified teacher target, consumed a large portion of teachers' energy. Of course, Technique should not be ignored. Without proper technical skills, students have no chance of making beautiful music. Yet, instead of practicing technical skills during repertoire rehearsal, Orff teachers might benefit by focusing on these skills during a brief warm-up period. Rather than trying to correct technique during challenging passages of repertoire, teachers could address these issues separately in simple, improvisatory pentatonic exercises. Some band and choir directors, as well as applied teachers, view warm-up periods as the most important part of instruction in which the building blocks of musical expression are laid. If students can develop good technical habits during warm-up periods, these habits may very well carry over into challenging passages during repertoire rehearsal; thus, allowing teachers to pay more attention to Pulse and Precision.

Overall, students demonstrated 11% more success when teachers identified targets during trials, rather than between trials. With results such as these, one might argue that

teachers should spend more time identifying targets during student performance and minimize teacher talk between trials. The logic would follow that such an approach might improve teaching efficiency and provide more time for student practice. The major fault of such an argument is that by concentrating on targets during performance, the teacher would be in the position of teaching reactively, rather than proactively. Comments made during performance often function to correct mistakes or to remind students what they should be doing. Instead of fostering independence during performance, these comments can function to keep students dependent on the teacher. Conversely, identifying targets between trials functions to prepare students for success and build independence. The more often teachers can proactively structure learning for student success, the less likely students will practice bad habits that will need to be corrected during valuable rehearsal time.

Although the 63% success rate noted in this study when students performed teacher targets identified between trials is admirable, it would be beneficial to identify ways to further elevate student success. An examination of teacher behaviors during target identification shows that some teacher behaviors are frequently associated with student success.

Teacher Behaviors During Target Identification Between Trials

Teacher targets frequently identified between trials were scrutinized to examine the relationship between teacher behaviors and student success. A wide variety of verbal and nonverbal teacher behaviors were observed during the identification of targets. The

frequency and function of particular behaviors led to further examination in categories of Explicit Directives, Specific Negative Feedback, and Positive Modeling. Major target categories examined included Precision, Pulse, Rhythmic Accuracy, Tempo, Note Accuracy, Dynamics, Pattern Sequence, and Technique. Results are summarized below:

1. Overall, the percentage of Explicit Directives preceding successful student performance (68%) was higher than the percentage of Explicit Directives preceding unsuccessful student performance (50%). In categories of Precision, Pulse, and Note Accuracy, percentage differences were 22%, 42%, and 33%, respectively.

2. Overall, the percentage of Specific Negative Feedback preceding successful student performance (21%) was slightly lower than the percentage of Specific Negative Feedback preceding unsuccessful performance (25%).

3. Overall, the percentage of Positive Modeling preceding successful student performance (43%) was higher than the percentage of Positive Modeling preceding unsuccessful student performance (30%). Percentage differences favoring Positive Modeling in individual categories were often about 20%.

4. Overall, the percentage of Explicit Directives in combination with other behaviors (including Feedback, Modeling, Questioning, and Information) preceding successful student performance (34%) was higher than the percentage of combination behaviors preceding unsuccessful performance (20%). This trend was observed in all major target categories except Rhythmic Accuracy and Pattern Sequence.

The number of samples in some target categories was too small to offer suggestions regarding the rehearsal of learned repertoire. However, overall findings across all major target categories provide information that may be explored further in future research.

Although much research on teaching effectiveness within music instruction has focused on the importance of feedback, results in this study suggest that Explicit Directives and Modeling may be even more important components of student success. Of course, many teacher targets included Specific Negative Feedback along with Explicit Directives, and at times, Specific Negative Feedback alone served to improve student performance. Specific Negative Feedback should not be discarded. Students need to understand the root of their performance problems, and evaluative statements are crucial to this process. However, teachers must remember to follow negative evaluations with clear, informative statements that instruct students how they may best improve their performance. Directives must be clear and explicitly related to the musical task at hand in a manner that leaves nothing to abstract assumption.

Conclusions and Implications

Making music in an Orff ensemble setting is difficult. Due to the lack of resonance characteristic of many percussion instruments and the repetitive ostinati so prevalent in many Orff ensemble arrangements, performing with precision is very challenging. Yet, the rewards and potential for musical growth make the challenge worthwhile.

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Results from this study indicate that teachers taught with a pace of instruction matching or even exceeding pace observed among expert band and choir directors. Yet, due to problems largely associated with Pulse and Precision, the success rate documented across all instrumental parts was relatively low (29%), demonstrating that pacing is a correlate of student success, not a cause. Although the rate of teacher instruction was high, 59% of teacher directives were procedural, rather than musical, in nature. Musical targets preceded less than half of all student performance trials.

When teachers identified targets between and during trials, students were more successful than unsuccessful. Technique was the most frequently identified target between and during student performance trials. Pulse and Precision represented just 17.2% and 5.6%, respectively, of all teacher targets.

Although the rate of teacher instruction was high, student performance trials seemed somewhat lengthy, considering the repetitive nature of many Orff ensemble pieces. Some trials lasted over two minutes long. As a result, student concentration waned and performance suffered. The unique repetitive tasks associated with Orff ensemble music make shorter trial lengths advisable, at least during passages when students are working to master difficult tasks. As tasks are mastered, trials may be extended until the final desired length is attained.

During student performance, teachers often chanted, sang, or played instruments. Although teacher support often resulted in improved student performance, progress was often short-lived. Students frequently reverted to old habits of inaccuracy as soon as teachers stopped performing with them. Rather than structuring tasks for success

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between trials, this reactive instructional strategy served more to "put out fires." A proactive strategy, in which teachers identified targets between trials more frequently, might result in student improvements that demonstrate greater longevity.

This study suggests that when teachers identify targets, they should utilize Explicit Directives and Positive Modeling. These behaviors may be more effective during delivery than Specific Negative Feedback. Although negative feedback is important, it only serves to identify problems in performance. Directives and Positive Modeling provide information needed to solve the problems.

In summary, Orff teachers usually have limited time to work with their students. For this reason, their teaching must be extremely efficient. Therefore teachers should maintain the high pace of instruction noted during verbalizations, yet replace the high incidence of procedural directives between trials with musical targets meant to improve specific aspects of student performance. Student performance trials should be short enough to ensure student success and gradually lengthened as students gain confidence and skill. When teachers identify targets, they should use Explicit Directives and Positive Modeling to demonstrate how to perform successfully, rather than relying on Specific Negative Feedback alone.

Recommendations for Further Research

Although many individuals have written pedagogical materials detailing proper sequencing activities when introducing Orff ensemble pieces, few if any have explored how teachers refine music after the initial note learning stages have occurred. In this

study, eight recognized Orff Schulwerk teachers were videotaped across four rehearsals as they worked to refine learned repertoire for percussion instruments in their regular settings. Portions of rehearsal in which teachers were working to improve student performance were isolated for detailed analysis. The primary goals of this study were to (1) examine teacher and student behaviors, (2) assess student performance irrespective of teacher targets, (3) identify teacher targets between and during trials, and (4) assess student performance related to teacher targets.

Observations from this study have generated other questions worthy of further research. These questions are presented below:

1. Although many pedagogical materials have been written to explain proper sequencing during the introductory phases of learning music for Orff ensembles, no one has examined what teachers actually do when introducing new materials. What behaviors do teachers and students exhibit during the introductory phases of learning music for Orff ensembles, and do these behaviors correspond with published pedagogical suggestions?

2. Repetition was the largest category of conditions unrelated to teacher targets preceding student improvement. What tasks can best be improved through repetition alone, and what is the optimal amount of repetition needed to make and solidify improvement?

3. Maintaining concentration during repetitive ostinati seems difficult. How many times can students repeat typical patterns before altering the pulse?

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4. Teachers usually engaged students in Full Ensemble Performance. Would performance gains be greater if teachers engaged students more frequently in short episodes of Section and Individual Performance?

5. Teachers identified Technique more frequently than any other teacher targets. If asked to evaluate student performance in videotapes of their own ensembles, would they continue to focus on Technique targets?

6. Many elementary teachers declare voice or piano as a primary instrument during college. What effect, if any, would one semester of applied percussion study have on their teaching strategies during Orff ensemble rehearsals?

7. Results in this study suggest that Explicit Directives and Positive Modeling may be more important than Specific Negative Feedback in producing student improvement. In a controlled experimental setting with a larger sample, would these findings be corroborated or discounted?

8. Which instrumental tasks typically seen in Orff ensemble arrangements are most difficult for children in upper elementary grades to perform? Which tasks are easiest?

9. What exercises would be most useful to improve students' abilities to perform difficult tasks?

10. What are the primary instructional goals among certified Orff Schulwerk teachers?

Elementary students enjoy playing instruments, and the Orff Schulwerk pedagogy

provides an easily accessible method to engage students in beautiful music making. Because many students will not receive additional music instruction after elementary school, teachers must utilize every resource to make these early musical experiences meaningful and instructive. In order to nurture meaningful experiences, teachers must structure learning for student success in a way that fosters musical excellence within even the simplest tasks.

The goal of this study was to examine recognized Orff Schulwerk teachers as they strived to teach beyond the superficial aspects of note learning to create meaningful, artistic music making. Systematic observation was used to document teacher and student behaviors during the rehearsal of learned repertoire for percussion instruments. Student performance was assessed to determine overall student success and students' ability to achieve teachers' performance goals in subsequent trials.

Although the Orff Schulwerk process has been studied from many perspectives, few if any researchers have sought to examine teaching effectiveness using student achievement as a dependent measure. It is hoped that this study will provide practical information for educators interested in Orff Schulwerk instruction and will foster further inquiry regarding teaching effectiveness based on student achievement in other genres of music instruction.

Appendix A

TEACHER QUESTIONNAIRE

PART ONE:

1. Name _____

2. Please list universities/colleges attended and degrees earned (Do not include Orff Schulwerk level certification. That information will be gathered in the second part of this questionnaire):

School	Degree(s)
_____	_____
_____	_____
_____	_____
_____	_____

3. How many years have you taught general music at the elementary level? _____

4. Please list any local, state, or national conventions for which any of your ensembles have performed.

_____

_____

_____

_____

_____

PART TWO:

9. The items in this category all pertain to your Orff Schulwerk certification training. Please complete information for every level of certification you have earned. If you have not completed all levels, please put N/A (not applicable) beside those levels.

Level I Certification

Teacher(s): _____

Location: _____

Year of Study: _____

Level II Certification

Teacher(s): _____

Location: _____

Year of Study: _____

Level III Certification

Teacher(s): _____

Location: _____

Year of Study: _____

Level IV (Master Class) Certification

Teacher(s): _____

Location: _____

Year of Study: _____

10. Are you a certified Orff Schulwerk instructor (Yes or No)? _____

11. Please list any Orff Schulwerk clinics you have presented at local, state, or national conventions:

_____

_____

_____

_____

_____

12. If you have published music or articles, please list them below:

_____

_____

_____

_____

Appendix B

Rehearsal Frame Group (RFG) Worksheet

Teacher 4 (Tape 3, RFG 1)

Transcription

D: Let me hear John and Amy first (BX)
PM: Teacher claps their rhythm while chanting all beat numbers)

Student Trial 1:
Teacher claps and chants their part

	1
BX	+
AX1	/
AX2	/
SX	/

D: You two ladies (AX1)

Student Trial 2
Teacher chants the AX part.
Teacher brings in BX and starts chanting their part

	2
BX	+
AX1	- Faulty start and then rushed
AX2	/
SX	/

SN: We're creeping up just a hair in the speed

D: Relax your shoulders
D: Can I hear the two of you (AX1) and the two of you (AX2)
D: Tammy, let her play a couple of them first, OK? So you can get the feel
I: It's on your big C.
PM: Teacher pats knees and chants AX2 part

Student Trial 3:
Teacher chants AX2 part
D: *Join whenever you're ready, Tammy.*
Teacher brings in BX.
D: *(to BX) Relax.*
D: *(to SX) Start on beat number one.*
Teacher starts chanting SX part.
Teacher points to one SX player's instrument.
D: *G first*
Teacher begins singing the song.
When teacher sees SX players having problems, s/he begins chanting their part again.
Teacher begins singing the song again.
Teacher chants the AX2 part again

	3
BX	- They rushed in two places. . The trial was so long that the pulse in all parts was uneven
AX1	+ Good start; they rushed with the AX2, but the AX2 part drives the pulse
AX2	- Uneven 8th notes in the pattern throughout. A couple of places with lots of rushing. **When the teacher started chanting their part, they improved**
SX	- They missed too many notes during the first part of the trial. They got off the beat later. **When the teacher started clapping their part, they got back on, but after s/he stopped, they had problems again**.

GP: We had it really nice for just a minute
SP: We had it so it was together
I: It's so easy, on Dan and Tammy, your part, it's so easy to get tricked into playing the ta-te's on a different beat there.

GP: You're doing really good
D: Let me hear y'all start at the same time.
Q: (to SX) What's your first note?
Student: E
I: E
I: And it's
PM: Teacher chants SX notes and beats of rests while snapping on the note names. Student question about beginning of note sequence
Teacher: Oh, I see. You're starting on your G, and she . . ., your starting on the 6th beat on the G.
D: Let's do it, on the very first one, you play E, and then from then on you go
PM: Teacher chants 6-1 while playing in the air
I: You go
PM: Teacher chants numbers while patting knees when the bars should be played.
I: So you go
PM: Teacher chants note names and numbers on rests while patting knees on the note names.
D: Why don't you, you want helicopter off the F in the middle?
Students remove a bar from their instruments.
Teacher: There's the problem. (I'm not classifying this as negative feedback because the students were not playing F.)
D: Try at the same time
PM: Teacher quickly chants the AX2 words

Student Trial 4:

	4
BX	- They came in early (false start because of this mistake)
AX1	/ They didn't play long enough to evaluate fairly
AX2	/ They didn't play long enough to evaluate fairly
SX	/ They did play one note, and it was correct, but there's not enough information to evaluate for improvement

D: (to BX) You're going to come in on 1.
I: I'll go
PM: Teacher chants Ready now play, Boom (teacher plays in air on "Boom")

Student Trial 5
Teacher chants SX part.
Then quickly chants AX2 part.
Teacher sings song.
Teacher claps SX rhythm while singing the song

	5
BX	- They got off the beat. At the very end of the trial, they got back on (by accident, I think). The teacher never seemed to notice they were ever off.
AX1	+ Best yet; however, the pulse in all parts was a bit uneven at times
AX2	+ Although rushing a bit a times, the 8th notes were more even, however, they got off the beat with the BX toward the middle of the trial. They got back on toward the last third. At the end of the trial the pulse became very uneven
SX	- They got off again. **When the teacher started clapping and chanting their part, they were fine. Toward the end of the trial, they got off the beat even with the teacher clapping and chanting their part.**

GP: We're so much closer than we were last week. Good try guys.

Directives

Data

D: Let me hear John and Amy first (BX)	P
D: You two ladies (AX1)	P
D: Relax your shoulders	Technique
D: Can I hear the two of you (AX1) and the two of you (AX2)	P
D: Tammy, let her play a couple of them first, OK? So you can get the feel	P
D: *Join whenever you're ready, Tammy.*	*P*
D: *(to BX) Relax.*	*Technique*
D: *(to SX) Start on beat number one.*	*Rhythm*
D: *G first*	*Notes*
D: Let me hear y'all start at the same time.	P
D: Let's do it, on the very first one, you play E, and then from then on you go	Notes/Rhythm

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D: Why don't you, you want to knock off the F in the middle?   P
D: Try at the same time   P
D: (to BX) You're going to come in on 1.   Rhythm

General Impressions

Almost every directive is procedural. The two directives regarding technique are an attempt to get students to relax so that the pulse won't rush.

Modeling

Data from SCRIBE

Positive   9
Negative   0
Performance   6

General Impressions

Feedback

Data

SN: We're creeping up just a hair in the speed
GP: We had it really nice for just a minute
SP: We had it so it was together
GP: You're doing really good **Approval Mistake**
GP: We're so much closer than we were last week. Good try guys.

General Impressions

Instructional Sequence

Data from SCRIBE

Forward   3
Backward   0
New Task   3
Repetition   2

Group Improvement

	1	2	3	4	5
BX	+	+	- They rushed in two places. The trial was so long that the pulse in all parts was uneven.	- They came in early (false start because of this mistake).	- They got off the beat. At the very end of the trial, they got back on (by accident, I think). The teacher never seemed to notice they were ever off.
AX1	0	- Faulty start and then rushed	+ Good start; they rushed with the AX2, but the AX2 part drives the pulse	/ They didn't play long enough to evaluate fairly.	+ Best yet; however, the pulse in all parts was a bit uneven at times
AX2	0	0	- Uneven 8th notes in the pattern throughout. A couple of places with lots of rushing. **When the teacher started chanting their part, they improved**	/ They didn't play long enough to evaluate fairly.	+ Although rushing a bit a times, the 8th notes were more even, however, they got off the beat with the BX toward the middle of the trial. They got back on toward the last third. At the end of the trial the pulse became very uneven
SX	0	0	- They missed too many notes during the first part of the trial. They got off the beat later. **When the teacher started clapping their part, they got back on, but after s/he stopped, they had problems again.**	/ They didn't play long enough to evaluate fairly.	- They got off again. **When the teacher started clapping and chanting their part, they were fine. Toward the end of the trial, they got off the beat even with the teacher clapping and chanting their part.**

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What aspect(s) of performance deserve(s) the most attention from the teacher?

AX pulse and overall rushing

Does the teacher address this issue?

AX pulse: No. The teacher models frequently but does not verbalize the need to keep the pulse steady.

Overall rushing: Not enough. The teacher briefly mentions rushing as a negative feedback statement after the second trial, but s/he does not mention this specifically again.

What improved student performance?

AX1:

Trial 2 to Trial 3: **Student readiness**

AX2:

During Trial 3: When the teacher **modeled during performance** by chanting words and clapping, students improved.

Trial 3 to Trial 5: The teacher does not address the issue of evenness verbally. Perhaps the **repetition** in Trial 3 coupled with the teacher's **modeling during the same trial** helped students play the 8th notes more evenly.

SX:

During Trial 3: Teacher **modeling during performance** helped students get back on the correct beat.

During Trial 5: Teacher **modeling during performance** helped students get back on the correct beat. However, **this strategy did not work at the end of this trial**.

Instructional Negatives

Trials were too long.
Feedback was minimal.
Feedback mistake
Directives were mainly procedural.
No decontextualization. Decontextualization would have helped the SX a lot.

What else, if anything, needs to be addressed?

BX in the last trial

Teacher Targets and Student Success

SN: We're creeping up just a hair in the speed (a2) **Yes, those students controlled the beat more at the beginning of the next trial. When the AX2 students came in, they rushed, and their part drives the pulse because they have the smallest note values.**
D: Relax your shoulders (a2) **Not evaluated. Students not on camera; however, their shoulders already looked relaxed.**
*D: (to BX) Relax. (d3) **Not evaluated. Student not on camera***
 *D: (to SX) Start on beat number one. (d3) **No. One student played the wrong note on beat one. The other one waited until beat 6.***
*D: (to SX) G first **Yes***
D: Let's do it, on the very first one, you play E, and then from then on you go
PM: Teacher chants 6-1 while playing in the air
I: You go
PM: Teacher chants numbers while patting knees when the bars should be played.
I: So you go
PM: Teacher chants note names and numbers on rests while patting knees on the note names. (a3) **Yes, students entered correctly on beat 1.**
D: (to BX) You're going to come in on 1.
I: I'll go
PM: Teacher chants Ready now play, Boom (teacher plays in air on "Boom") (a4) **Yes**

References

Addo, A. O. (1990). A survey of music teaching strategies in Ghanaian elementary schools as a basis for curriculum development. *Masters Abstracts International, 30*(04), 986. (UMI No. MM63904)

Adelman, E. J. (1979). An integration of music therapy theory and Orff-Schulwerk techniques in clinical application. *Masters Abstracts International, 18*(02), 116. (UMI No. 1313888)

Alley, J. M. (1980). The effect of self-analysis of videotapes on selected competencies of music therapy majors. *Journal of Music Therapy, 17,* 113-132.

Amchin, R. A. (1995). Creative musical response: The effects of teacher-student interaction of the improvisation abilities of fourth- and fifth-grade students. *Dissertation Abstracts International, 56*(08), 3044A. (UMI No. 9542792)

American Orff-Schulwerk Association (1997). *Guidelines for Orff Schulwerk teacher training courses levels I, II, III*, (Rev. ed.). Cleveland, OH: Author.

American Orff-Schulwerk Association (2004). *What is Orff Schulwerk?* Retrieved 1-21-04 from http://www.aosa.org/about/default.asp.

Ardrey, C. M. (1999). Middle school general music: Kodaly, Dalcroze, Orff and the developmental needs of adolescents. *Dissertation Abstracts International, 60* (07), 2419A. (UMI No. 9938640)

Arnold, J. A. (1991). Using videotape self-analysis to improve teaching during

rehearsals. *Update: Applications of Research in Music Education, 10*(1), 10-14.

Arnold, J. A. (1995). Effects of competency-based methods of instruction and self-observation on ensemble directors' use of sequential patterns. *Journal of Research in Music Education, 43,* 127-138.

Auh, M. (1995). Prediction of musical creativity in composition among selected variables for upper elementary students. *Dissertation Abstracts International, 56* (10), 3875A. (UMI No. 9604632)

Baker, D. S. (1980). The effect of appropriate and inappropriate in-class song performance models on performance preference of third- and fourth-grade students. *Journal of Research in Music Education, 28,* 3-17.

Barker, C. S. (1981). Using Orff-Schulwerk as a method to enhance self concept in children with learning disabilities. *Dissertation Abstracts International, 42*(05), 2026A. (UMI No. 8124776)

Bauer, W. I. (1993). The relationship between rehearsal procedures and contest ratings for high school bands. *Contributions to Music Education, 20,* 32-44.

Bebeau, M. J. (1982). Effects of traditional and simplified methods of rhythm-reading instruction. *Journal of Research in Music Education, 30,* 107-119.

Becker, W. C., Engelmann, S., & Thomas, D. R. (1971). *Teaching: A course in applied psychology.* Chicago: Science Research Associates.

Beegle, A. C. (2001). An examination of Orff-trained general music teachers' use of improvisation with elementary school children. *Dissertation Abstracts International, 40*(02), 287A. (UMI No. 1406497)

Benson, W. L. (1989). The effect of models, self-observation, and evaluation on the

modification of specified teaching behaviors of an applied music teacher.

Update: Applications of Research in Music Education, 7(2), 28-31.

Bitcon, C. H. & Ball, T. S. (1974). Generalized limitation and Orff-Schulwerk. *Mental*

Retardation, 12, 36-39.

Blocher, L, Greenwood, R., & Shellahamer, B. (1997). Teaching behaviors of middle

school and high school band directors in the rehearsal setting. *Journal of*

Research in Music Education, 45, 457-469.

Bohlmeyer, D. (1989). President's panel: Research in music education. *The Orff*

Echo, 21(2), 14-15, 26.

Bondurant-Koehler, S. (1995). The effect of selected modes of music instruction on

children's music preference. *Dissertation Abstracts International, 56*(08), 3044A.

(UMI No. 9542637)

Boras, C. (1988). The Orff-Schulwerk and traditional music education: A comparison of

approach. *Masters Abstracts International,* 40(07), 2002. (UMI No. ML45438)

Bowers, J. (1997). Relationship of sequential patterns of instruction to music teaching

effectiveness of elementary education majors. *Journal of Research in Music*

Education, 45, 428-443.

Bowles, C. L. (1998). Music activity preferences of elementary students. *Journal of*

Research in Music Education, 46, 193-207.

Brendell, J. K. (1996).   Time use, rehearsal activity, and student off-task behavior during

the initial minutes of high school choral rehearsals. *Journal of Research in Music*

Education, 44, 6-14.

Brophy, T. S. (1998). The melodic improvisations of children ages six through twelve: A

developmental perspective. *Dissertation Abstracts International, 59*(09), 3386A.

(UMI No. 9906615)

Buckner, J. (1997). Assessment of teacher and student behavior in relation to the

accomplishment of performance goals in piano lessons (Doctoral dissertation, The

University of Texas at Austin, 1997). *Dissertation Abstracts International, 58*

(07), 2578A.

Butler, A. (2001). Preservice music teachers' conceptions of teaching effectiveness,

microteaching experiences, and teaching performance. *Journal of Research in*

Music Education, 49, 258-272.

Byo, J. L. (1990). Recognition of intensity contrasts in the gestures of beginning

conductors. *Journal of Research in Music Education, 38,* 157-163.

Caldwell, W. M., Jr. (1980). A time analysis of selected musical elements and leadership

behaviors of successful high school choral conductors. *Dissertation Abstracts*

International, 41, 976A-977A. (UMI No. 8020349)

Carey, N., Kleiner, B., Porch, R., Farris, E. (2002). *Arts Education in Public*

Elementary and Secondary Schools, 1999-2000. Retrieved June 4, 2004, from the

U.S. Department of Education, National Center for Education Statistics Web site:

http://nces.ed.gov/pubs2002/2002131.pdf

Carpenter, R. A. (1988). A descriptive analysis of relationships between verbal behaviors

of teacher-conductors and ratings of selected junior and senior high school

    rehearsals. *Update: Applications of Research in Music Education, 7*(1), 37-40.

Cassidy, J. W. (1990). Effect of intensity training on preservice teachers' instruction

    accuracy and delivery effectiveness. *Journal of Research in Music Education*, *38,*

    164-174.

Cassidy, J. W. (1993). A comparison between students' self-observation and instructor

    observation of teacher intensity behaviors. *Bulletin of the Council for Research in*

    Music Education, 115, 15-30.

Caton, B. D. (1982). A study of music education Master's degrees at selected colleges

    and universities. *Dissertation Abstracts International, 4* (08), 2587A. (UMI No.

    8300218)

Cavitt, M. E. (1998). A descriptive analysis of error correction in expert teachers'

    instrumental music rehearsals (Doctoral dissertation, The University of Texas at

    Austin, 1998). *Dissertation Abstracts International, 59*(06), 1958A.

Chang, H. (1991). A status report and suggestions for improving elementary music

    education in the Republic of China. *Dissertation Abstracts International, 52*(04),

    1245A. (UMI No. 9125211)

Chenault, J. B. (1993). A survey of public school music in the state of North Carolina for

    1990-1991. *Dissertation Abstracts International, 54*(11), 4023A. (UMI No.

    9411586)

Chin, J. (1993). Curriculum for introducing Chinese instruments in grades four through

    six. *Masters Abstracts International, 32*(01), 27. (UMI No. 1352631)

Clausel, S. L. S. (1998). Applications of Cambourne's model of literacy learning and the Orff-Schulwerk music method to the development of a curriculum model for Mississippi music education, K-1. *Dissertation Abstracts International, 59*(10), 3768A. (UMI No. 9908513)

Colprit, E. J. (2000). Observation and analysis of Suzuki string teaching. *Journal of Research in Music Education, 48,* 206-221.

Colwell, C. M. (1995). Effect of teaching setting and self-evaluation on teacher intensity behaviors. *Journal of Research in Music Education, 43,* 6-21.

Connor, S. M. (1986). The Kodaly and Orff approaches to music education in the curriculum guides of Nova Scotia (1968-1972). *Masters Abstracts International, 40*(07), 2002. (UMI No. ML 29783)

Consortium of National Arts Education Associations. (1994). *National standards for arts education*: *What Every Young American Should Know and Be Able to Do in the Arts* Reston, VA: MENC: The National Association for Music Education.

Cox, J. (1986). Choral rehearsal time usage in a high school and a university: A comparative analysis. *Contributions to Music Education, 13,* 7-21.

Cox, J. (1989). Rehearsal organizational structures used by successful high school choral directors. *Journal of Research in Music Education, 37,* 201-218.

Cripps, P. J. (1990). The music of primal peoples and its use in the elementary general music class. *Masters Abstracts International, 28*(04), 473. (UMI No. 1340114)

Darrow, A. A., Johnson, C. M., Ghetti, C. M., & Achey, C. A. (2001). An analysis of

188

music therapy student practicum behaviors and their relationship to clinical effectiveness: An exploratory investigation. *Journal of Music Therapy, 38,* 307-320.

Daigneault, D. J. (1993). A survey of recommended procedures and teaching methods for building and maintaining a wind and percussion instrumental music education program grades six through twelve. *Dissertation Abstracts International, 54*(09), 3362A. (UMI No. 9406640)

Davis, A. P. (1998). Performance achievement and analysis of teaching during choral rehearsals. *Journal of Research in Music Education, 46,* 496-509.

Derby, S. E. (2001). Rehearsal of repertoire in elementary, middle, and high school choirs: How teachers effect change in student performance (Doctoral dissertation, The University of Texas at Austin, 2001). *Dissertation Abstracts International, 62*(03), 954A.

Dickey, M. R. (1991). A comparison of verbal instruction and nonverbal teacher-student modeling in instrumental ensembles. *Journal of Research in Music Education, 39,* 132-142.

Doerksen, P. F. (1999). Aural-diagnostic and prescriptive skills of preservice and expert instrumental music teachers. *Journal of Research in Music Education, 47,* 78-88.

Duke, R. A. (1987). Observation of applied music instruction: The perceptions of trained and untrained observers. In C. K. Madsen & C. A. Prickett (Eds.), *Applications of Research in Music Behavior* (pp. 115-124). Tuscaloosa, AL: University of Alabama Press.

189

Duke, R. A. (1994). Bringing the art of rehearsing into focus: The rehearsal frame as a

    model for prescriptive analysis of rehearsal conducting. *Journal of Band*

    Research, 30(1), 78-95.

Duke, R. A. (1999/2000). Measures of instructional effectiveness in music research.

    Bulletin of the Council for Research in Music Education, 143, 1-48.

Duke, R. A., & Blackman, M. D. (1991). The relationship between observers' recorded

    teacher behavior and evaluation of music instruction. *Journal of Research in*

    Music Education, 39, 290-297.

Duke, R. A., & Farra, Y. (1997). *SCRIBE: Simple Computer Recording Interface for*

    Behavioral Evaluation. Austin, TX: Learning and Behavior Resources.

Duke, R. A., & Henninger, J. C. (1998). Effects of verbal corrections on student attitude

    and performance. *Journal of Research in Music Education, 46,* 482-495.

Duke, R. A., & Madsen, C. K. (1991). Proactive versus reactive teaching: Focusing

    observation on specific aspects of instruction. *Bulletin of the Council for*

    Research in Music Education, 108, 1-14.

Duke, R. A., & Prickett, C. A. (1987). The effect of differentially focused observation on

    evaluation of instruction. *Journal of Research in Music Education, 35,* 27-38.

Duke, R. A., Prickett, C. A., & Jellison, J. A. (1998). Empirical description of the pace

    of music instruction. *Journal of Research in Music Education, 46,* 265-280.

Dunn, D. E. (1997). Effect of rehearsal hierarchy and reinforcement on attention,

    achievement, and attitude of selected choirs. *Journal of Research in Music*

    Education, 45, 547-567.

Eterman, L. A. L. (1990). An approach to music education based on the indications of

    Rudolf Steiner: Implications for grades 1-3. *Masters Abstracts International, 30*

    (03), 447. (UMI No. MM59749)

Forsythe, J. L. (1975). The effect of teacher approval, disapproval, and errors on

    student attentiveness: Music versus classroom teachers. In C. K. Madsen, R. D.

    Greer, and C. H. Madsen, Jr. (Eds.), *Research in music behavior* (pp. 49-55).

    New York: Teachers College Press.

Forsythe, J. L. (1977). Elementary student attending behavior as a function of classroom

    activities. *Journal of Research in Music Education, 25,* 228-239.

Forsythe, R. (1984). The development and implementation of a computerized preschool

    measure of musical audiation. *Dissertation Abstracts International, 45*(08),

    2433A. (UMI No. 8425572)

Frazee, J. (1987). *Discovering Orff: A curriculum for music teachers*. New York:

    Schott.

Froelich, H. (1977). The relationship of selected variables to the teaching of singing.

    Journal of Research in Music Education, 25, 115-130.

Froelich, H. (1979). Replication of a study on teaching singing in the elementary general

    music classroom. *Journal of Research in Music Education, 27,* 35-45.

Gabbard, C. P. (2000). *Lifelong motor development* (3rd ed.). Boston: Allyn and Bacon.

Goolsby, T. W. (1996). Time use in instrumental rehearsals: A comparison of

    experienced, novice, and student teachers. *Journal of Research in Music*

    Education, 44, 286-303.

Goolsby, T. W. (1997). Verbal instruction in instrumental rehearsals: A comparison of

three career levels and preservice teachers. *Journal of Research in Music*

Education, 25, 21-40.

Goolsby, T. W. (1999). A comparison of expert and novice music teachers' preparing

identical band compositions: An operational replication. *Journal of Research in*

Music Education, 47, 174-187.

Grant, T. W. (1991). The effect of Orff Schulwerk instruction on memory development

in children ages ten to eleven. *Dissertation Abstracts International, 52*(06),

2061A. (UMI No. 9127644)

Greenfield, D. G. (1978). Evaluation of music therapy practicum competencies:

comparisons of self- and instructor ratings of videotapes. *Journal of Music*

Therapy, 15, 15-20.

Hamann, D. L.; Baker, D. S.; McAllister, P. A., & Bauer, W. I. (2000). Factors affecting

university music students' perceptions of lesson quality and teaching

effectiveness. *Journal of Research in Music Education, 48,* 102-113.

Hamilton, H. J. (1999). Music learning through composition, improvisation and peer

interaction in the context of three sixth grade music classes. *Dissertation*

Abstracts International, 60(07), 2420A. (UMI No. 9937857)

Harrington, J. A. (1972). An experiment in the Orff method of music instruction.

Masters Abstracts International, 11(02), 104. (UMI No. 1303949)

Harris, M. A. (1977). Auditory training of learning disabled using Orff music.

Dissertation Abstracts International, 37(08), 5036A. (UMI No. 7703149)

192

Hedden, S. K. (1990). Does Schulwerk work with junior high students? *The Orff Echo, 22*(2), 17.

Hendel, C. (1995). Behavioral characteristics and instructional patterns of selected music teachers. *Journal of Research in Music Education, 43,* 182-203.

Henninger, J. C. (2002). The effects of knowledge of instructional goals on observations of teaching and learning. *Journal of Research in Music Education, 50,* 37-50.

Hensley, S. E. (1981). A study of the musical achievement of elementary students taught by the Memphis City Curriculum Guide and students taught by the traditional approach. *Dissertation Abstracts International, 42*(11), 4757A. (UMI No. 8207825)

Herlihy, W. J. (1979). A survey of classroom music instruction in Catholic elementary schools in the dioceses of New York state. *Dissertation Abstracts International, 41*(01), 150A. (UMI No. 8013426)

Hewitt, M. P. (2001). The effects of modeling, self-evaluation, and self-listening on junior high instrumentalists' music performance and practice attitude. *Journal of Research in Music Education, 49,* 307-322.

Hochheimer, L. (1976). Musically planned creativity and flexibility—elementary classroom: Implications for Orff-Schulwerk, the Kodaly method and music therapy. *Creative Child & Adult Quarterly, 1,* 200-206.

Hollander, F. M. & Jurhs, P. D. (1974). Orff-Schulwerk: An effective treatment tool with autistic children. *Journal of Music Therapy, 11,* 1-12.

Hudgens, C. K. K. (1987). A study of the Kodaly approach to music teaching and an

investigation of four approaches to the teaching of selected skills in first grade

music classes. *Dissertation Abstracts International, 48*(03), 556A. (UMI No.

8713951)

Hunt, L. J. (1983). An analysis of college music education positions in the academic

labor market from 1973-1981. *Dissertation Abstracts International, 45*(03),

780A. (UMI No. 8412623)

Jaccard, J. L. (1995). A conceptual model for literature-based musical education.

Dissertation Abstracts International, 56(11), 4312A. (UMI No. 9606520)

Jellison, J. A. (in press).

Jellison, J. A., & Wolfe, D. E. (1987). Verbal training effects on teaching units: An

exploratory study of music teaching antecedents and consequents. In C. K.

Madsen & C. A. Prickett (Eds.), *Applications of Research in Music Behavior*

(pp. 135-148). Tuscaloosa, AL: University of Alabama Press.

Jessen, P. M. (1995). The effect of audiation on elementary students' rhythm

improvisations. *Masters Abstracts International*, *31*(04), 1460. (UMI No.

MM77923)

Joslin, D. C. (1990). Instrumental accompaniments for ethnic songs suitable for use in

the elementary general music curriculum. *Masters Abstracts International,

29*(02), 198.

Keetman, G. (1970). *Elementaria: First acquaintance with Orff-Schulwerk* (M. Murray,

Trans.). London: Schott.

Kelley, L. L. (1981). A combined experimental and descriptive study of the effect of

music on reading and language. *Dissertation Abstracts International, 42*(03), 1076A. (UMI No. 8117801)

Killian, J. N. (1981). Effect of instructions and feedback on music teaching skills. *Journal of Music Therapy, 18,* 166-180.

Kostka, M. J. (1984). An investigation of reinforcements, time use, and student attentiveness in piano lessons. *Journal of Research in Music Education, 32,* 113-122.

Kriske J. & DeLelles, R. (1985). *Five golden rings: A holiday program for children.* Las Vegas, NV: Kid Sounds.

Kubitsky, I. (1998). Ewe children's music from Ghana, West Africa, in the classroom. *Masters Abstracts International, 36*(05), 1214. (UMI No. 1389656)

Kuhn, T. L. (1975). The effect of teacher approval and disapproval on attentiveness, musical achievement, and attitude of fifth grade students. In C. K. Madsen, R. D. Greer, and C. H. Madsen, Jr. (Eds.), *Research in music behavior* (pp. 40-48). New York: Teachers College Press.

Levi, R. G. (1991). A field investigation of the composing processes used by second-grade children creating original language and music pieces (creativity). *Dissertation Abstracts International, 52*(08), 2853A. (UMI No. 9202227)

Lu, D. T. (1986). The effects of teaching music skills on the development of reading skills among first graders: An experimental study. *Dissertation Abstracts International, 47*(02), 4344A. (UMI No. 8706622)

Lyne, J. K. (1991). Beginning strings class instruction: Practice and theory (beginning

195

strings class). *Dissertation Abstracts International, 52*(06), 2063A. (UMI No. 9134876)

Maclin, J. P. (1993). The effect of task analysis on sequential patterns of music instruction. *Journal of Research in Music Education, 41,* 48-56.

Madden, J. A. (1984). Zoltan Kodaly and Carl Orff: Implications for program development in elementary instrumental music education. *Dissertation Abstracts International, 45*(01), 72. (UMI No. 8410153)

Madsen, C. K., & Alley, J. M. (1979). The effect of reinforcement on attentiveness: A comparison of behaviorally trained music therapists and other professionals with implications for competency-based academic preparation. *Journal of Music Therapy, 16,* 70-82.

Madsen, C. K., & Duke, R. A. (1985a). Perception of approval/disapproval in music education. *Bulletin of the Council for Research in Music Education, 85,* 119-130.

Madsen, C. K., & Duke, R. A. (1985b). Observation of teacher/student interactions in music: Observer perceptions versus actual classroom events. *Journal of Research in Music Education, 33,* 205-214.

Madsen, C. K., & Geringer, J. M. (1983). Attending behavior as a function of in-class activity in university music classes. *Journal of Music Therapy, 20,* 30-38.

Madsen, C. K., & Geringer, J. M. (1989). The relationship of teacher "on-task" to intensity and effective teaching. *Canadian Journal or Research in Music Education, 30,* 87-94.

Madsen, C. K., Standley, J. M, & Cassidy, J. W. (1989). Demonstration and recognition

of high and low contrasts in teacher intensity. *Journal of Research in Music Education, 37,* 85-92.

Madsen, C. K., Standley, J. M., Byo, J. L., & Cassidy, J. W. (1992). Assessment of effective teaching by instrumental music student teachers and experts. *Update: Applications of Research in Music Education, 10*(2), 20-24.

Madsen, K. (2003). The effect of accuracy of instruction, teacher delivery, and student attentiveness on musicians' evaluation of teacher effectiveness. *Journal of Research in Music Education, 51,* 38-50.

Malitowski, C. M. (2001). The journey from instrumentalist to musician: Reflections on the implementation of the Conservatory method in musical performance. *Masters Abstracts International, 41*(01), 108. (UMI No. MQ68339)

Martin, M. A. (1992). An examination of the Orff-Schulwerk approach to music education in a public elementary school: A replication study. *Dissertation Abstracts International, 53*(08), 2728A. (UMI No. 9234992)

Mathey-Engelbrect, M. V. (1990). Comprehensive musicianship: An American approach to schoolmusic. *Masters Abstracts International, 29* (01), 18.

McKoy, C. L. (1998). The effect of two instructional approaches on fourth-grade students' preferences for indigenous folk music of Ghana. *Dissertation Abstracts International, 60*(02), 372A. (UMI No. 9919185)

Medford, C. D. (2003). Teaching musicality from the beginning of a child's instruction: The GBYSO Intensive Community Program and how it incorporates

the philosophies of Kodaly, Orff, and Suzuki (Zoltan Kodaly, Carl Orff, Shinichi

   Suzuki). *Dissertation Abstracts International, 64*(03), 839A. (UMI No. 084848)

MENC: The National Association for Music Education. (1994). *The school music

   program: A new vision*. Reston, VA: Author.

Moore, J. L. S. (1984). Rhythm and movement: An objective analysis of their

   association with music aptitude. *Dissertation Abstracts International, 45*(05),

   1328A. (UMI No. 8417898)

Moore, R. S. (1976). The effects of videotaped feedback and self-evaluation forms on

   teaching skills, musicianship, and creativity of prospective elementary teachers.

   Bulletin of the Council for Research in Music Education, 47, 1-7.

Moore, R. S. (1981). Comparative use of teaching time by American and British

   elementary school specialists. *Bulletin of the Council for Research in Music

   Education, 66-67,* 62-68.

Moore, R. S. (1987). Effects of age, sex, and activity on children's attentiveness in

   elementary school music classes. In C. K. Madsen & C. A. Prickett (Eds.),

   Applications of research in music behavior (pp. 26-31). Tuscaloosa, AL:

   University of Alabama Press.

Moore, R. S., & Bonney, J. T. (1987). Comparative analysis of teaching time between

   student teachers and experienced teachers in general music. *Contributions to

   Music Education, 14,* 52-58.

Munsen, S. C. (1986). A description and analysis of an Orff-Schulwerk program of

music education. *Dissertation Abstracts International, 47*(09), 3351A. (UMI No. 8701575)

Murphy, M. K., & Brown, T. S. (1986). A comparison of preferences for instructional objectives between teachers and students. *Journal of Research in Music Education, 34,* 134-139.

Murray, K. C. (1975). The effect of teacher approval/disapproval on musical performance, attentiveness, and attitude of high school choruses. In C. K. Madsen, R. D. Greer, & C. H. Madsen (Eds.), *Research in music behavior: Modifying music behavior in the classroom* (pp. 165-180). New York: Teachers College Press.

Muse, M. B. (1994). A comparison of two methods of teaching singing to primary children: An attempt to determine which of two approaches to teaching singing is more effective. *Masters Abstracts International, 33*(01), 30. (UMI No. 1358052)

Nolin, W. H. (1973). Attitudinal growth patterns toward elementary school music experiences. *Journal of Research in Music Education, 21,* 123-134.

Olson, R. G. (1964). A comparison of two pedagogical approaches adapted to the acquisition of melodic sensitivity in sixth grade children: The Orff method and the traditional method. *Dissertation Abstracts International, 27*(02), 500A. (UMI No. 6503508)

Orff, C. (1978). Carl Orff and his work: Documentation (Vol. 3: The Schulwerk, M. Murray, Trans.). New York: Schott. (Original work published 1976)

Orman, E. K. (2002). Comparison of the national standards for music education and

elementary music specialists' use of class time. *Journal of Research in Music Education, 50,* 155-164.

Orrell, M. S. (1995). The work of Grace C. Nash in music education in the United States, 1960-1990, and her influence upon members of the American Orff-Schulwerk Association in the states of Arizona and Colorado. *Dissertation Abstracts International, 56*(12), 4694A. (UMI No. 9611456)

Osterby, P. M. (1988). Orff-Schulwerk in North America, 1955-1969. *Dissertation Abstracts International, 50*(01), 94A. (UMI No. 8823221)

Pogonowski, L. (1985). Attitude assessment of upper elementary students in a process-oriented music curriculum. *Journal of Research in Music Education, 33,* 247-257.

Ponath, L. H. & Bitcon, C. H. (1972). A behavioral analysis of Orff-Schulwerk. *Journal of Music Therapy, 9,* 56-63.

Pontious, M. F. (1982). A profile of rehearsal techniques and interaction of selected band conductors (Doctoral dissertation, The University of Illinois at Urbana-Champaign, 1982). *Dissertation Abstracts International, 4* (09), 2920A.

Price, H. E. (1983). The effect of conductor academic task presentation, conductor reinforcement, and ensemble practice on performers' musical achievement, attentiveness, and attitude. *Journal of Research in Music Education, 31,* 245-247.

Price, H. E. (1992). Sequential patterns in music and learning to use them. *Journal of Research in Music Education, 40*, 14-29.

Price, H. E., & Hardin, L. E. (1990). Elementary school music teachers' comparative use

of classroom time: Teachers who are and are not Orff-Schulwerk certified.
Missouri Journal of Research in Music Education, 27, 30-49.

Price, H. E., & Yarbrough, C. (1993/1994). Effect of scripted sequential patterns of
instruction in music rehearsals on teaching evaluations by college nonmusic
students. *Bulletin of the Council for Research in Music Education, 113,* 41-50.

Prickett, C. A., & Duke, R. A. (1992). Evaluation of music instruction by musicians and
nonmusicians assigned differential observation tasks. *Bulletin of the Council for
Research in Music Education, 113,* 41-50.

Prytuluk, N. A. (2000). Sound-to-symbol pedagogical practices in music and language.
Masters Abstracts International, 39(06), 1469. (UMI No. MQ59762)

Rastall, R. L. (1989). Using the Orff-Schulwerk process in pre-piano lessons for early
elementary-aged children. *Masters Abstracts International, 28*(02), 182. (UMI
No. 1336969)

Richardson, N. S. (1979). The Orff technique as an informal diagnostic screening for
reading readiness. *Dissertation Abstracts International, 40*(12), 6243A. (UMI
No. 8012700)

Rosenthal, R. K. (1984). The relative effects of guided model, model only, guide only,
and practice only treatments on the accuracy of advanced instrumentalists'
musical performance. *Journal of Research in Music Education, 32,* 265-273.

Rosenthal, R. K., Wilson, M., Evans, M., & Greenwalt, L. (1988). Effects of different
practice conditions on advanced instrumentalists' performance accuracy. *Journal
of Research in Music Education, 36,* 250-257.

201

Saliba, K. (1991). *Accent on Orff: An introductory approach.* New Jersey: Prentice Hall.

Sang, R. C. (1985). Path analysis of an instructional effectiveness model for instrumental

music teaching. *Bulletin of the Council for Research in Music Education, 85,*

195-206.

Sang, R. (1987). A study of the relationship between instrumental music teachers'

modeling skills and pupil performance behaviors. *Bulletin of the Council for*

Research in Music Education, 91, 155-159.

Schmidt, C. P. (1989). Applied music teaching behavior as a function of selected

personality variables. *Journal of Research in Music Education, 37,* 258-271.

Schmidt, C. P. (1992). Reliability of untrained observers' evaluations of applied music

instruction. *Bulletin of the Council for Research in Music Education, 112,* 17-28.

Schmidt, C. P. (1995). Attributions of success, grade level, and gender as factors in

choral students' perceptions of teacher feedback. *Journal of Research in Music*

Education, 43, 313-329.

Schmidt, M. (1998). Defining "good" music teaching: Four student teachers' beliefs and

practices. *Bulletin of the Council for Research in Music Education, 138*, 19-46.

Shamrock, M. E. (1988). Applications and adaptations of Orff-Schulwerk in Japan,

Taiwan, and Thailand. *Dissertation Abstracts International, 49*(09), 2576A.

(UMI No. 8822884)

Shamrock, M. E. (1995). *Orff Schulwerk: Brief history, description, and issues in global*

dispersal. Cleveland, OH: American Orff-Schulwerk Association.

Siebenaler, D. (1997). Analysis of teacher-student interactions in the piano lessons of

children and adults. *Journal of Research in Music Education, 45,* 6-20.

Siemens, M. T. (1969). A comparison of Orff and traditional instructional methods in

music. *Journal of Research in Music Education, 17,* 272-285.

Sims, W. L. (1986). The effect of high versus low teacher affect and passive versus

active student activity during music listening on preschool children's attention,

piece preference, time spent listening, and piece recognition. *Journal of Research*

in Music Education, 34, 173-191.

Single, N. A. (1990). An exploratory study of pacing in the instrumental music rehearsal.

Contributions to Music Education, 17, 32-43.

Smith, R. A. (1977). The value of an Orff Schulwerk program in the elementary school

curricula. *Masters Abstracts International, 16*(02), 90. (UMI No. 1310953)

Snell, C. A. (1980). The philosophical basis of Orff-Schulwerk. *Dissertation Abstracts*

International, 41(04), 1470A.

Snyder, S. (1990). Question upon question: A quest for Orff Schulwerk. *The Orff Echo,*

22(4), 8-9.

Speer, D. R. (1994). An analysis of sequential patterns of instruction in piano

lessons. *Journal of Research in Music Education, 42,* 14-26.

Spradling, R. L. (1985). The effect of timeout from performance on attentiveness

and attitude of university band students. *Journal of Research in Music Education,*

34, 173-191.

Steen, A. (1992). *Exploring Orff: A teacher's guide.* New York: Schott.

Stone, M. L. (1971). Kodaly and Orff music teaching techniques: History and present

practice. *Dissertation Abstracts International, 32*(05), 2734A. (UMI No. 7130519)

Taetle, L. D. (1999). The effect of active and passive music instruction on the spatial ability of kindergarten children. *Dissertation Abstracts International, 60*(04), 1059A. (UMI No. 9927519)

Taylor, D. B. (1984). Professional music therapist opinion concerning competencies for entry level music therapy practitioners. *Dissertation Abstracts International, 45*(09), 436A. (UMI No. 8424343)

Tsisserev, A. (1993). An analysis of the music education methodology of Dmitry Kabalevsky and a comparison with those of Zoltan Kodaly and Carl Orff. *Masters Abstracts International, 35*(02), 399. (UMI No. MM13537)

Vander Ark, S. D., Nolin, W. H., & Newman, I. (1980). Relationships between musical attitudes, self-esteem, social status, and grade level of elementary children. *Bulletin of the Council for Research in Music Education, 62,* 31-41.

VanWeelden, K. (2002). Relationships between perceptions of conducting effectiveness and ensemble performance. *Journal of Research in Music Education, 50,* 165-176.

Verrastro, R. E. (1975). Verbal behavior analysis as a supervisory technique with student teachers of music. *Journal of Research in Music Education, 23*, 171-185.

Wagner, M. J., & Strul, E. P. (1979). Comparisons of beginning versus experienced elementary music educators in the use of teaching time. *Journal of Research in Music Education, 27,* 113-125.

Wang, C. C., & Sogin, D. W. (1997). Self-reported versus observed classroom activities
in elementary general music. *Journal of Research in Music Education, 45,* 444-456.

Warner, B. (1991). *Orff-Schulwerk: Applications for the classroom*. Englewood Cliffs,
NJ: Prentice-Hall:.

Watkins, R. E. (1986). A descriptive study of high school choral directors' use of
modeling, metaphorical language, and musical/technical language related to
student attentiveness. *Dissertation Abstracts International, 47*(05), 1644A.
(UMI No. 8618590)

Weisert-Peatow, H. S.(2002). Leadership in the American Orff-Schulwerk Association,
1968--1998: A Delphi study. *Dissertation Abstracts International, 63*(05),
1762A. (UMI No. 305346)

Whitehead, B. J. (2001). The effect of music-intensive intervention on mathematics
scores of middle and high school students. *Dissertation Abstracts International,
62*(08), 2710A. (UMI No. 3023878)

Wimmer, D. (1993). The organization of the American Orff-Schulwerk Association from
1968-1980 and its influence upon music education in America. *Dissertation
Abstracts International, 54*(03), 857A. (UMI No. 9320328)

Witt, A. C. (1986). Use of class time and student attentiveness in secondary instrumental
music rehearsals. *Journal of Research in Music Education, 34,* 34-42.

Wolfe, D. E., & Jellison, J. A. (1990). Music and elementary education students'

evaluations of music-teaching scripts. *Journal of Research in Music Education.* *38*, 311-321.

Woody, R. H. (1999). The relationship between explicit planning and expressive performance of dynamic variations in an aural modeling task. *Journal of Research in Music Education, 47,* 331-342.

Woskowiak, L. F. (1973). Programmed music reading games for first grade utilizing certain principles of Dalcroze, Kodaly, and Orff. *Dissertation Abstracts International, 34*(04), 1959A. (UMI No. 7324051)

Wunderlich, J. C. (1980). A field-based design for an undergraduate course in elementary school general music methods. *Dissertation Abstracts International, 41*(03), 979A. (UMI No. 8020170)

Yarbrough, C. (1975). Effect of magnitude of conductor behavior on students in selected mixed choruses. *Journal of Research in Music Education, 23,* 134-146.

Yarbrough, C., & Hendel, C. (1993). The effect of sequential patterns on rehearsal evaluations of high school and elementary students. *Journal of Research in Music Education, 41*, 246-257.

Yarbrough, C., & Price, H. E. (1981). Prediction of performer attentiveness based on rehearsal activity and teacher behavior. *Journal of Research in Music Education, 29,* 209-217.

Yarbrough, C., & Price, H. E. (1989). Sequential patterns of instruction in music. *Journal of Research in Music Education, 37,* 179-187.

Yarbrough, C., Price, H. E., & Bowers, J. (1991). The effect of knowledge of research on

rehearsal skills and teaching values of experienced teachers. *Update: Applications of Research in Music Education, 9*(2), 17-20.

Yarbrough, C., Price, H. E., & Hendel, C. (1994). The effect of sequential patterns and modes of presentation on the evaluation of music teaching. *Bulletin of the Council for Research in Music Education, 120,* 33-45.

Younger, K. G. (1998). An observational analysis of instructional effectiveness in intermediate level band and orchestra rehearsals. *Dissertation Abstracts International, 59*(06), 1961A. (UMI No. 9838169)

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