

FINDING THE BALANCE:

JAN KAGARICE, A CASE STUDY OF A MASTER TROMBONE TEACHER

by

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Approved by the Committee on the Degree of Doctor of Education

Date MAY 18 2011

Submitted in partial fulfillment of the
requirements for the Degree of Doctor of Education in
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ABSTRACT

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Karen Lynn Marston

The purpose of this study was to investigate and document the pedagogical techniques practiced by Jan Kagarice, Adjunct Professor of Trombone at the University of North Texas. Given that the study of master teachers has been identified as a valid method for defining effective teaching (Duke & Simmons, 2006), the intended outcome was to construct and codify a cohesive framework for effective brass teaching which can serve as an exemplar for the community at-large. Kagarice has also been documented as successfully rehabilitating musicians who have been diagnosed with the maladaptive disorder Focal Task Specific Embouchure Dystonia (FTSED), so an additional aim was to increase knowledge and awareness of the types of behaviors and practices which may lead to this condition.

Data were gathered over the course of three site visits, during which the researcher observed and recorded lessons (n=19) and conducted interviews with both primary (Jan Kagarice) and secondary (student) subjects. At the conclusion of the data

collection phase, the researcher concluded that the emotional component of FTSED was too complex in scope to be meaningfully addressed within the context of this project; therefore, conclusions were limited to Kagarice's methods of instruction with healthy players only.

Analysis focused on Kagarice's assertion that "physiology is not pedagogy," meaning music-learning is not a series of steps to be undertaken, but a *process*; thus, the primary emphasis was on pedagogical behaviors and goals, rather than a prescriptive approach to brass performance. This perspective generated five primary findings: a focus on *metacognitive skills*, the physiological concept of *form follows function*, the use of both *macro* and *micro pacing* indicative of Bruner's (1960) *Spiral Curriculum* and Montessori (1912)/Séguin's *Three Period Lesson*, a holistic model for accessing the *Zone of Proximal Development* (Vygotsky, 1978) through a *five phase model* of instruction, and a taxonomy for applied instruction which targets *unified function* (Dettmer, 2006), or a synthesis of the cognitive, affective, physical, and social learning domains.

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To Jan, my longtime mentor and friend, thank you for opening your studio and work to me. Your passion, energy, and enthusiasm for the art form of music have long been an inspiration in my own career, and I am tremendously grateful for the opportunity to document your approach so that it can be of benefit to others. I am humbled by the trust you place in my abilities and it is my greatest hope that you and your students will find this paper to be both affirming and informative.

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I – INTRODUCTION

During my educational experiences as a young trombonist, I encountered two very different approaches to brass instruction. Early on – in my high school studies and initial work as an undergraduate performance major – my teachers adhered to a fairly standardized pedagogical method in which the physical mechanics of playing are known, well-defined, and reproducible. Primarily, this approach centered on the proper use of the embouchure, and held that learning to play the instrument was a matter of reproducing a predetermined configuration of muscle placement which conforms to the shape, movement, and tension level that is believed to be used by advanced players. From this perspective, the role of the teacher is to observe the student, isolate problem areas, and “prescribe” specific physical directives aimed at correcting them.

For me, this felt very non-musical. The procedure undertaken to play my instrument seemed complex and overwhelming because every technical issue in my performance was linked to a problem with my physical approach. “Tweeking” my embouchure in order to find a setting that would work for all registers was a never-ending mission. Consistent efficiency seemed like a temperamental and precarious combination of so many component movements, each of which had to be drilled and mastered individually, that I could only conceive of it as an incredibly elusive goal.

My own love for music did not start out with trombone playing. Both my parents were active musicians and I had been exposed to the joy and excitement of the art form since a very young age, so my difficulties with mastering the complexities of brass pedagogy seemed to contradict my own connection to the process of music-making. I

began to wonder whether or not I had truly found my calling and I gave serious consideration to putting my horn down for good.

Fortunately, I experienced a turning point when I began studying with Jan Kagarice, an adjunct professor of trombone at the University of North Texas, the school I was attending at that time. In my first lesson, Jan shifted my focus from physiology to musicality. There was no talk of muscles or placement; instead, we worked on moving air efficiently and smoothly while focusing the ear on the desired musical sound. I was so engaged in the process that I did not notice how much time had passed. In fact, that first lesson lasted over four hours. Despite this, when we were done, I raced to find a practice room so that I could begin applying what we had discussed. Finding no space available, I went outside and practiced behind the music building. I was *that* excited. I continued to work with Jan for the remaining two years of my undergraduate study, and my enthusiasm for playing not only continued to grow throughout that time, but also propelled me forward into my professional career for many years following.

Jan's personality is outgoing, gregarious, enthusiastic, and very positive. Undoubtedly, her unique presence certainly contributes to her impact as a teacher and personalizes her approach, but the basic structure of her teaching at that time could be described in terms of the *Song and Wind* method advocated by Arnold Jacobs, then tubist with the *Chicago Symphony*. While a "traditional" approach to brass pedagogy is regimented and clearly delineated (albeit with some dissenting voices and points of controversy), Jan's process was individualized and creative. By focusing on what she called the *concept* – a detailed aural mentalization of the expressive and technical aspects of a given musical phrase or technique – the specific functioning of musculature was

secondary to the *sound* coming from the instrument. Physical instructions were avoided in favor of a detailed study of the music itself. In short, my experiences with Jan were the *opposite* of the approach I had initially encountered.

The brass community at-large has now begun to take significant notice of Jan Kagarice's methods, particularly because she is the only teacher in the United States known to have consistent success facilitating a re-training process in players who have developed the performance-related movement disorder, *Focal Task Specific Embouchure Dystonia* (FTSED). Many of the musicians she has helped are seasoned professionals who now publically endorse her method (Vining, 2008; Fletcher, 2008; Valentine, 2006).

In 2008, the *International Trombone Association* (ITA) recognized Jan Kagarice with the prestigious *Neil Humfeld Award* for uniquely effective, innovative, and successful teaching. She was nominated by Dennis Wick, then ITA President and former principal trombonist with the *London Symphony Orchestra*, who described Kagarice's work as "groundbreaking," and reported that she had facilitated in the rehabilitation of over 100 players diagnosed with FTSED. San Francisco-based bass trombonist Doug Miner asserts that her "instructional methodology...has the potential to revolutionize the way brass instruments are taught" (Kagarice, 2008, p. 60). The announcement of this award was accompanied by Jan's own narrative, which provides an overview of both her teaching philosophy and the personal influences which have shaped her approach.

An overview of Jan Kagarice's Teaching Philosophy

Interestingly, Jan Kagarice's teaching style is largely inspired by a childhood spent in the swimming pool, which she describes being very formative in terms of

showing her what both excellent and ineffective teaching looks like. Her first attempt at learning to swim was quashed by a coach who overloaded her with too many esoteric details. By contrast, Estelle Williams, Jan's second coach, inspired learning by explaining not only *what* she wanted students to do, but *why* she wanted them to do it. In Jan's words, she "gave us a global understanding of efficiency," which focused on swimming as the "ART of moving the most amount of water behind you as you glide forward." Kagarice describes this as promoting "effortless performance" through repetition of "efficient excellence." She also summarizes the qualities of a great teacher with Ms. Williams in mind: strength and patience in equal measures, the ability to observe, guide, and facilitate, to foster both discipline and fun, and to view the learner with a reverence for the holistic nature of every human being (Kagarice, 2008, p. 59).

Jan also recognizes the influence of several other teachers and colleagues. In junior high school, her experiences with John Allen were characterized by an enthusiasm and lightheartedness that she continues to carry with her today. She quotes her second teacher, Maureen Horgan, as saying, "the student doesn't care what you know unless they know that you care." From John Swallow, trombone professor at New England Conservatory, Kagarice took the important concept that all music has a message to convey and the job of the musician is to learn how to listen to it so that meaning can reveal itself. In her brief studies with Arnold Jacobs, she learned that the *ear*, rather than the *embouchure*, controls pitch. She also credits her husband and colleague Vern Kagarice with providing many practical tools from his own "workbench" (Kagarice, 2008).

While researching learning methodologies to write a book for beginning trombone players, Jan discovered the teaching philosophies of Dr. Maria Montessori. She felt such a deep connection with these ideas that she began studying the method in earnest. Eventually earning certification, she spent four years teaching in a Montessori school (working with students ages 2 ½ -7). Throughout that period, she continued to teach trombone as an adjunct professor at the University of North Texas (Kagarice, 2008).

Currently, Kagarice has returned to trombone teaching full time, but Montessori philosophy continues to guide much of her work. She states:

You would think that guiding 3-6 year olds would be completely different than teaching college trombonists, but there are more similarities than you might think. Both groups are away from home for the first time and are trying to figure out who they are and how they fit within the new community. I think that the fluctuation between the two groups definitely gave me a more global perspective of what my role in their learning process should be (Kagarice, 2008, p. 65).

Preliminary Study

In the spring of 2009, I renewed my studies with Jan Kagarice. After some fifteen years of professional life, I had not encountered another teacher capable of producing such immediately positive results, so I felt she would be an excellent candidate for a case study; however, her work rehabilitating players coping with FTSED appeared to be a new development, so it seemed prudent to reexamine her methods before embarking on a full scale study. Because I was traveling between Houston and Denton (Texas), the preliminary study consisted of monthly (rather than weekly) meetings, beginning in February and concluding in May of 2009. On each of these occasions, I was scheduled

for a 2-4 hour lesson, and asked to observe the lessons of the other students who were scheduled for that day.

As a former student, I was familiar with Jan Kagarice's methods and assumed that returning to study with her would be a good refresher course; however, it became quickly evident that her method had evolved significantly since my undergraduate years. To my surprise, I played very little in the first lesson; instead, we did a lot of talking, specifically about the concept of *blowing*. Moving air is a fundamental skill in brass playing, so it would seem that an advanced player would be well versed in this area; however, I had always focused on *breathing*, particularly in terms of how to *take in* a large quantity of air. In twenty-five years of brass playing, no one else had ever called my attention to the outward flow of air. I had always been taught to "tank up," or inhale as much air as possible.

What Jan was describing seemed to be a reimagining of *Song and Wind*, specifically in terms of the concept that the human body is a "study of products" – action is most efficient when it is conceptualized as a goal-oriented thought rather than a breakdown of its composite movements (Frederiksen, 1996b). Because the *action of playing* occurs as air is moving *outward*, the target thought which triggers efficient respiration for brass players is *blow*.

This is in sharp contrast to the basic premise of tone production which has shaped brass teaching for decades. Whereas traditional methods emphasize *buzzing* – a vibration which is initiated by holding the muscles of the face in a tension-based configuration as the player forces air through them (Farkas, 1962) – as the core building block of tone

production, Jan believes that *blowing* – an ongoing focus on the outward flow of air so that the player becomes sensitized to the subtle changes of air pressure and speed which control pitch – generates a more balance and efficient connection between the player and the instrument. In Jan's view, the embouchure functions most efficiently when it is in a state of *release*, or free from tension. Although there have been other teachers who have shared this perspective to a greater or lesser degree (Jacoby, 1990; Adam, 1975), it is largely outside of the norm in terms of predominant methods for teaching embouchure, breathing, and technique.

Personally, this information was revelatory. At the end of my masters studies (ten years prior to the preliminary study and several years after my initial work with Jan), I suffered a very debilitating experience and had never fully recovered. During a degree recital, my embouchure completely failed, leaving me virtually incapable of playing. It felt as if the muscles of my face were locked in place and totally unresponsive. Somehow, I finished the program, but remember standing on stage in a state of helplessness, completely unable to control my body or the sub-par performance it was producing. I was devastated. As time passed, I recovered both emotionally and physically, but continued to avoid the types of playing I felt would trigger problems, which meant I almost never played in the high register unless I had to.

During the preliminary study period, I completely changed my approach to tone production and performance. Although the experience was at times challenging, confusing, and even frustrating, the end result was extremely gratifying. My upper register felt free and resonant and the overall responsiveness of my sound was markedly improved across all registers. Although this technical progress was exciting, what was

the most meaningful was that I no longer had to think about how I was playing, or what my body was doing to produce sound. Instead, I felt free to focus on the expressive aspects of music-making, which was personally very empowering.

In May of 2009, I performed a full recital program in support of the requirements of my doctoral degree. Unlike my prior experience, I enjoyed playing in front of an audience and felt an immediacy of expression and communication that I had not connected to in some years. My own transformation during the preliminary study afforded me some insights into the new developments in Jan Kagarice's approach, but I did not have a comprehensive understanding of why it had worked so effectively for me, or how I could use her method with my own students; therefore, I felt a clear need to embark on a full-scale inquiry aimed at codifying her work.

Need for the Current Study

It has been strongly suggested that a best-practices approach to applied teaching can be gleaned from studying master teachers (Duke & Simmons, 2006; Gholson, 1993). There are a number of justifications for this practice cited by the field. First, master teachers are effective at eliciting change in students; therefore, their strategies represent "the highest form of instructional skill in music" (Duke & Simmons, 2006, p. 16). Because highly experienced teachers are likely to possess an array of instructional tools, they also offer the opportunity to investigate a variety of methods. High levels of mastery are also correlated with creative approaches to problem-solving (Bloom, 1986), so teachers like Jan Kagarice, whose methods are time-tested and highly refined (Berliner, 1986) may also possess particularly innovative solutions to common issues.

Although a profile of a master teacher is limited in scope because it is context-specific, understanding the philosophies and behaviors that characterize particularly effective instruction provides the field at-large with grist for discussion, analysis, and meaningful progress (Berliner, 1986).

Problem Statement

The field of brass pedagogy in general is characterized by many dissenting opinions regarding a best-practices approach to teaching (Vining, 2008; Wekre, 1994). In recent years, increasing awareness about Focal Task Specific Embouchure Dystonia and its negative impact on highly developed, professional players has prompted some to question the traditionally accepted methods for teaching tone production on brass instruments (Dean, 2006; Fletcher, 2008).

In addition to being publically recognized by the field as a particularly innovative and effective teacher (2008 *Neil Humfeld Award, International Trombone Association*), Jan Kagarice has extensive, documented success with players plagued by extreme muscle dysfunction, including FTSED (Kagarice, 2008). Her work may also pose important implications for the instruction of healthy players, as it has been theorized that dystonia and other maladaptive embouchure conditions are a byproduct of certain pedagogical practices (Fletcher, 2008).

Despite the potential benefits for the field at-large, little is currently known regarding the specific or general details which guide Jan Kagarice's approach; therefore, a methodical investigation of her teaching has the potential to yield meaningful and

reproducible strategies that may inform practices within the field of brass pedagogy, as well as the area of applied studio instruction in music.

Purpose Statement

The purpose of this study is to investigate and document the pedagogical techniques practiced by Jan Kagarice, Adjunct Professor of Trombone at the University of North Texas, Denton, Texas, through the lenses of general educational theories in the field applied instruction, Montessori teaching philosophies, and practices and methodologies relevant to brass teaching and performance. The intended outcome is to construct and codify a cohesive framework for effective teaching which can serve as an exemplar for the community of brass (and music) teaching at-large. As is feasible and relevant, issues relating to Focal Task Specific Embouchure Dystonia will also be addressed.

Research Questions

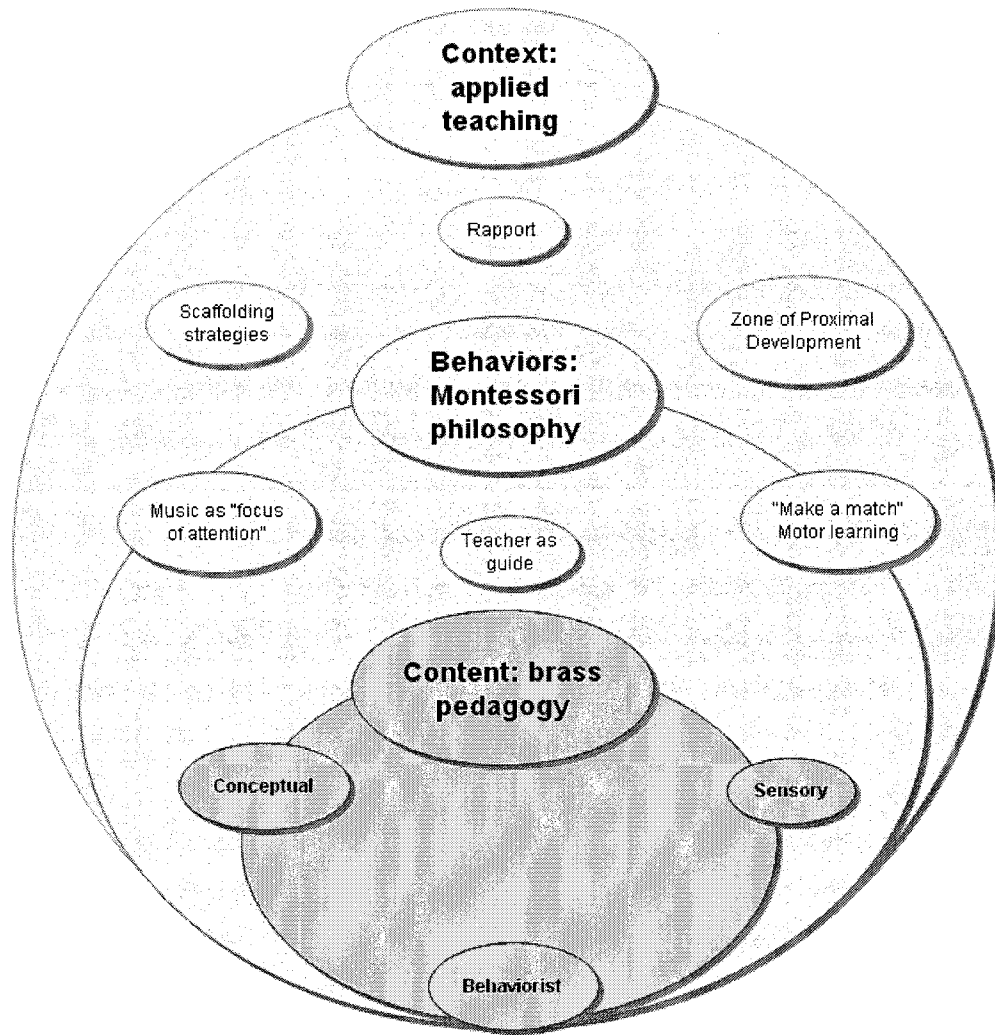
For the purposes of this study, the phrase “applied studio” will be defined as any pedagogical activity in which Jan Kagarice addresses specific or general goals or skills relevant to music-learning on brass instruments. This may include retraining sessions with players suffering from maladaptive physical states such as FTSED, lessons taught in her studio at the University of North Texas, lessons taught in her home studio, and/or structured or ad-hoc conversations in which teaching methods, performance practices, or other related philosophies are discussed. Because Jan Kagarice appears to practice the same pedagogy for healthy and dystonic players, both contexts will be evaluated as indicative of her overall teaching approach.

1. What pedagogical dimensions can be observed in Jan Kagarice's activities, actions, and behaviors within the context of applied trombone lessons?
 - a. How do these activities relate to the physiological aspects of brass playing?
 - b. How do these activities relate to a Montessorian's perspective?
 - c. How do these activities relate to the prevailing context of applied teaching?
2. What practices emerge as large-scale themes from within the patterns of activities exhibited by Jan Kagarice in an applied brass context?
3. What large-scale themes can be organized into a profile of practice which characterizes the teaching philosophy implemented by Jan Kagarice in an applied brass context?

Conceptual Framework

Jan Kagarice appears to practice a comprehensive pedagogy which is impacted by a number of variables. First, studio teaching in music carries historically-established expectations of behavior which generate a "contextual infrasystem of pedagogical action" (Gholson, 1993, p. 230) inherent to the norms of this setting. This is the social context and therefore influences all other aspects of the process. Second, Kagarice's experience and education as a Montessori teacher guides her interactions with students. Pacing, focus, and goals are directed by this perspective. Lastly, the skills inherent to the mastery of sound production and musical expression on brass instruments are the targeted activities of day-to-day work. Using this framework, the issues pertaining to the environment of applied teaching form a *context*, Montessorial perspectives guide *behaviors*, and the technical and musical issues of brass playing drive the *content* of Jan Kagarice's teaching philosophy and practices.

Figure 1: Conceptual Framework of Jan Kagarice's Teaching Philosophy



The Applied Studio

What is the goal of applied instruction in music? The simple answer is to promote *mastery* in the student, but this is a somewhat broad and diffuse notion. Musical mastery is regarded not as a destination, but a lifelong process of continuous learning and progress which requires the acquisition and maintenance of a complex skill set encompassing mental, physical, and affective aptitudes (Johnson, 2002). Technical proficiency is often the focus of instructional goals, but in practice, this is secondary to

emotional imperative. The exemplars of our field – the virtuosic – are distinctive not for their ability to amaze audiences with technical fireworks, but for the deeply felt emotive states which they can communicate and evoke through the medium of performance (Green, 2003). In order to reach this level of mastery, mental focus and emotional openness must accompany physical skills; therefore, training artists is a multi-faceted, holistic process. (Buck, 1944; Severson & McDunn, 1983; Sloboda, 1994; Johnson, 2002; Loubriel, 2006)

Private instruction in music is also a historical vessel which promotes and preserves the traditions of the art form (Kennell, 2002). In addition to artistic aims, there are certain expectations of performance, style, technique, and presentation which are inherent to the environment. Individual creativity is sometimes overshadowed by the need to preserve these traditions. Further, the conservatory model of instruction may be so focused on historical forms that musicians fail to become well-versed in modern styles and therefore fail to meaningfully connect with contemporary audiences (Gregory, 2005). The tension between tradition and modern cultural expectations as it pertains to expression is a compelling dimension of the applied studio. The way in which a teacher manages this issue may point to an important underlying philosophical stance regarding the overall purpose of musical study.

Additionally, the immediacy of interpersonal relationships within the one-on-one studio setting is unlike classroom environments, meaning applied teaching cannot be directly compared to other educational settings. (Abeles, 1975; Abeles, Goffi, & Levasseur, 1992) The apprenticeship between an expert teacher and a novice performer leads to a level of intimacy akin to the parent-child connection. (Jones, 1975) This

“professionally personal” (Grasha, 2002) relationship is multi-faceted and cannot be assessed using the same measure or expectations which are applied to group teaching (Abeles, 1975). Given this dynamic, as well as variables such as student age, ability level, or personal disposition, teachers may need to adopt greater flexibility to move between a variety of roles which are not necessary or applicable in other settings (Grasha, 2002).

The Montessori Perspective

Jan Kagarice’s experience and education as a Montessori teacher is of interest to this study because it appears to impart behaviors and expectations which are in contract to both contemporary trends in education and the traditions of brass pedagogy. In the greatest sense, modern schooling is a product of the late 19th Century Industrial Age. Public education was established based on the model of high efficiency and “scientific management principles” which were popular at the time. Children were seen as the “raw materials” of a productive society, teachers as their “mid-level managers,” and schools as the “plants” in which future workers were built. This evolved into the *behaviorist* movement in the United States educational system, which then had an important impact on brass pedagogy (see “Behaviorism” in brass pedagogy) (Lillard, 2005, p. 7).

In a behaviorist model, complex topics are broken down into “discrete learning items,” each of which is drilled in turn until “mental bonds” are formed. Students are rewarded for effective memorization of the requisite pieces of information, and subpar performance elicits punishment. The teacher is viewed as a “major force” in controlling and manipulating student behavior. Any exploration outside of the established curricular

protocols is highly discouraged, because the goal is for learning to be uniform and standardized. This approach was successfully championed and propagated in the early 20th Century by Edward Lee Thorndike, a professor of psychology at Teachers College, Columbia University (Lillard, 2005, p. 9).

A contemporary of Thorndike, Maria Montessori was among a group of educational commentators and teachers who advocated a different perspective. Together with Dewey, Piaget, and Bruner, she championed the benefits of a *constructivist* approach, which views knowledge as something constructed by the student, rather than discrete items which can be acquired, and that learning is most meaningful when connected to a relevant context. While her perspectives have survived in the form of specialized private schools, the ability of behaviorist models to provide quantitative proof of student success has prevented progressive curricula such as Montessori's from gaining footing in the culture of modern public schools (Lillard, 2005).

Given this, Kagarice's specific use of Montessori philosophies situates her somewhat outside of accepted notions about education; therefore, this aspect of her teaching is a unique variable. Specifically, she describes three primary concepts which shape her work. First, Kagarice eschews the idea of the teacher as an authority figure, preferring instead to refer to herself as a *guide*. Second, she views the primary role of the teacher as managing *focus of attention*, so that the student remains centered on the task at hand, rather than the teacher or specific rules regarding process or behavior. Lastly, she asserts that the motor skills required in order to perform on a brass instrument emerge naturally and incrementally out of the student's developing knowledge of the musical language as the body learns to *make a match* with the conception of sound in the brain, or

the internal ear. She links this to the “conceptual” approach disseminated in the brass field by tubist Arnold Jacobs (Kagarice, 2008). Kagarice summarizes the perspective:

In the United States, we often use music to teach people how to play an instrument vs. the player learns how to play the instrument by focusing on the music, as in the brass band tradition (p. 64).

Schools of Thought in Applied Brass Pedagogy

From an acoustical standpoint, the tone production mechanisms of brass instruments are unique, and even problematic. Sound is not an intrinsic function of the apparatus, as in other instruments; rather, it must be created, nurtured, and sometimes coaxed by the player (Loubriel, 2005). Efficient performance requires the synchronization of a number of diverse skills, including air flow, lip placement, tongue articulation, and instrument mechanics. If timing is not discovered early and continually exploited, students “flail away” (Severson & McDunn, 1983, p. 3) and fail to gain confidence, consistency, or mastery. At worst, brasses have an unfortunate reputation for explosive, non-musical sounds that seem to defy control of the player. Such potentially embarrassing expressions may account for the tendency of brass players to fall into the trap of – as Arnold Jacobs frequently commented – *paralysis by analysis*.

Perhaps it is this quality that has rendered the pedagogical literature on brass playing so complex, contradictory, and confusing. The field is highly segmented, with camps of teachers and students touting their methods as the only “correct” way to teach, learn, or perform (Wekre, 1994; Vining, 2008). This can be a confusing landscape for the aspiring player. Choosing a pedagogical approach often means forsaking many others because contradictions become too striking to reconcile. King (2004) notes that

brass players tend to congregate in camps around the methods of specific teachers, and then discredit any ideas which are not in agreement with their preferred approach.

As all of these conflicting ideas fight for dominance within the field, they also mingle with each other and become distorted or misunderstood. A particular technique or approach may gain popularity not necessarily because it works, but simply because it becomes a part of the oral tradition which is passed down over generations from teachers to students. In this process, the core contradictions between differing perspectives become amplified, which can be debilitating to young players who attempt to follow instructions in a very literal way (Vining, 2008).

Given this environment, it is difficult to codify a “best practices” approach to brass teaching, because there is simply no one method, or even technique, which is systematically applied across the field. It would appear that either (1) there *are* many different ways to achieve mastery, or (2) the “correct” way has yet to be discovered. In either case, it cannot be denied that the authors of the various methods are highly experienced and successful teacher-artists, so it is reasonable to conclude that there is helpful information to be gleaned from them. In order to accurately situate Jan Kagarice’s approach relative to the field at large, a summary of the attitudes and practices which characterize the work of other well-known teachers will provide a context for understanding her methods.

Controversy notwithstanding, a review of the literature finds three distinct schools of thought which provide some level of structure to the field. While it is not asserted that these categories are completely exclusive or consistently delineated, and certainly there

are examples of significant overlap between them, it is helpful to group ideas which have similar philosophical underpinnings for the purpose of facilitating meaningful comparisons.

Within this discussion, it is recognized that a pedagogical practice studied in an archived format fails to reproduce its subject matter in totality. It is assumed that in all cases, significant levels of nonverbal communication during actual lessons likely exercised significant influence on students (King, 2004); however, if structure is to be brought to the field, it must grow from a more comprehensive view of its primary practitioners. Moving from an acceptance of this caveat, the topic of brass pedagogy is organized into four broad perspectives: *behaviorist*, *conceptual*, *sensory*, and *blended*.

II – REVIEW OF THE LITERATURE

Introduction/Structure of the Review

The literature review will be organized into three broad topic areas pertaining to the context, behaviors, and content of Jan Kagarice's applied teaching. These are, respectively: *applied teaching*, *Montessori philosophy*, and *brass pedagogy*. This structure is intended to illuminate the various social layers which inhabit the applied teaching environment. The interpersonal dynamics practiced in this setting are motivated by both surface features, such as the need to communicate a specific, targeted technical goal on the instrument, as well as deeper cultural or educational goals which may not reveal themselves to the casual observer. Like the critic investigating a work or art, the researcher seeking a comprehensive perspective must synthesize both external formal features and internal emotional meanings. (Bresler & Stake, 2002) To that end, the context, behaviors, and content which appear to exercise influence on Jan Kagarice's approach will be investigated in depth. (Gholson, 1993)

Context: The Pedagogy of Applied Teaching in Music

Defining Quality Teaching

What does excellent teaching in the applied studio look like? This is a problematic question because private music teachers rarely conform to a preset standard of practice; rather, they typically draw from their own skills and build teaching methods based on their own experiences as performers. The idea of research, which seeks to uncover global, generalized truths and codify a best practices approach, may be

somewhat in conflict with the traditions of music instruction; therefore, clear definitions of expert teaching within the applied music studio have yet to be articulated by the field at-large. (Kennell, 2002; Duke & Simmons, 2006)

Part of the challenge is that one-on-one teaching is fundamentally different than group teaching. The individual needs of the student take on a greater immediacy within the applied studio (Grasha, 2002) and the primary teaching modes are unlike those generally used in a classroom setting. Traditional measures of efficacy, such as the quality of lectures, are not applicable to this context; therefore, Abeles (1975) employed an extensive polling processes aimed at understanding how students conceive of quality teaching in the applied studio. He reported that rapport, instructional systemization (the teacher's overall method as it is communicated to the student), instructional skill (overall style), musical knowledge, and general instructional competence (the ability to create a positive learning environment and accurately gauge student progress; aptitude for teaching) are more suitable identifiers of quality teaching in this context. Abeles, Goffi, and Levasseur (1992) found a correlation between high success rates in students and the presence of these conditions; therefore, the quality of applied instruction can be seen as having an effect on learners within this environment.

The studio environment is also dynamic in that no two students have the same needs, goals, or existing skills. Depending on these variables, instruction will be most effective if it is tailored to the unique needs of the learner. While it is clear that the teacher must exhibit the knowledge and knowhow of an *expert* in the field, this may need to be tempered by acting as a *model* of ideal behavior, or enhanced through the role of the teacher as a *formal authority* in the field at-large. For a more accomplished student, the

teacher may be more helpful in a *facilitator* or *delegator* capacity, as direct monitoring of progress may not be necessary. To maximize the potency of these various roles, the teacher must be equipped to engage in a variety of behaviors, including acting as a role model, coach, or consultant, offering mini-lectures or feedback, or listening, questioning, and offering advice. Ideally, an experienced teacher is equipped to float in and out of these diverse roles and activities with ease (Grasha, 2002).

Gholson (1993) investigated whether systematic observation of a master teacher could yield a pattern of practice which characterizes their work. Using a layered approach to data coding and analysis, she separated the various levels of social phenomena at play, which she defined as applied methods, student-teacher language, and pedagogical concerns related to the instrument (violin). This enabled her to focus on a number of recurrent themes and practices which were then used to construct pedagogical approach relative to that practitioner.

Duke and Simmons (2006) assert that effective practices in the field of applied pedagogy can be gleaned by observing expert teachers. Through a review of lessons administered by three teachers who are regarded as preeminent in their respective fields, the researchers concluded that the “highest form of instructional skill in music” (p. 16) can be described using three broad categories. First, expert teachers communicate goals/expectations and implement processes for attaining them. This includes setting and managing specific *lesson targets*. Second, they are highly efficient at effecting immediate, discernable change in the quality of student performance. Third, master teachers convey information effectively, including both positive and negative comments in verbal form, and provide an aural model by demonstrating through performance. The

researchers also identified nineteen distinct activities or behaviors which were observed in lessons, including the presence of both negative (frequently) and positive (less frequently) feedback and the use of proximal goals.

Although not directly in reference to the one-on-one setting, Bain (2004) suggests a broader definition of expert teaching by turning a constructivist eye on the learner. The ways in which the teacher impacts and engages the student both during and after the instructional experience is more telling in terms of what constitutes excellent teaching than is any of the specific actions or events which occur within in the lesson. Similarly, Montessori believed that great teaching is found not by watching the teacher, but by observing how the teacher affects the student. Learner-engagement, and not teacher direction, is a sign of efficacy. (Kagarice, 2008)

Scaffolding Strategies

Within the applied setting, teacher-behaviors are often conceptualized by the research field as temporary cognitive supports which boost knowledge and confidence within the novice learner as new skill sets are incrementally learned. Once the student gains understanding and facility, the teacher retracts this “bolster” so that he/she can function independently (Kennell, 2002). Wood, Bruner, and Ross (1976) investigated the expert-novice relationship through this lens and identified six basic categories of “scaffolding strategies.”

When a teacher mobilizes action toward a specific goal, they are *recruiting* the student’s efforts. By *marking critical features*, or pointing out specific and existing aspects of the current task, the student’s attention is directed toward an intended aspect of

performance, either positive or negative. Teachers also engage in *task manipulation* or temporarily changing the difficulty of a musical phrase so as to facilitate learning of a specific element, such as tempo or style. Through *demonstration*, the teacher can provide an exemplary model. Sometimes, the model is deliberately negative so as to show undesirable results of a particular technical or musical choice. By practicing *direction management*, or the setting of long and short-term goals, the teacher looks forward and plans for student success. Teachers also practice *frustration control* by motivating students, often using positive statements, to push through difficulties.

Bruner (1985) gave shape to this model by creating a possible progression of scaffolding techniques. Teachers begin with demonstration, move through task manipulation, and mark critical features until student mastery is attained. Conversely, Kennell (1989) suggests that teacher intervention is not pre-ordered, but is based on impromptu decision-making skills which evaluate what is or is not working for the student.

This is also related to the idea of “pacing,” or the extent to which the teacher effectively manages the duration of lesson activities. Kennell (2002) identified this as an important factor in student success and students also report that they appreciate and respond to consistency in this area. Kennell (1997) also expanded teacher strategies to include “self-problem-solving interventions,” which serve the purpose of familiarizing the teacher with the specific needs of a particular learner. Such actions are not aimed at student learning, but afford the teacher a context in which to function.

Rosenthal (1984) investigated three behaviors: teacher modeling, teacher verbalizations, and a combination of teacher modeling/verbalizations, and found that model-only instruction resulted in the highest number of correctly performed measures from the students in the study. Using a similar methodology, Kennell (1989) reported that demonstration was most effective in the context of learning new concepts, but that marking critical features best addressed cases where the student needed a reminder of information already absorbed, and task manipulation was most successful for working on new skills.

Scaffolding strategies are often facilitated through the use of verbal, rather than musical, communication. Helper (1986) found, among other observations, that teachers dominate private lesson activities and rely heavily on verbalizing statements rather than asking questions, that technique tends to take precedence over expressive activities, and students generally contribute primarily by performing the tasks requested by the teacher. Typically, teachers give verbal instructions and students respond through a performance, although this exchange is rarely planned in advance and appears to be primarily improvisatory in nature. Given the limitations of language to fully address the scope of musical creativity and expression, it is possible that this communication paradigm restricts musical development, or that our idea of what constitutes progress may be stunted by the parameters of the speech we use to direct it (Kennell, 2002; Severson & McDunn, 1983).

Social Theories

The path to mastery, as it is practiced in the applied music tradition, is a shared venture. The student teacher dyad is one of social interdependence, and collaborative, caring support breeds confidence and progress (Mahn & John-Steiner, 2002). There are a number of ways to conceptualize this relationship, but for the sake of clarity, this section will move from the broad to the specific.

First, it is important to recognize the generalized ways in which a teacher affects her students. Learning occurs not only directly, through teacher intervention, but also indirectly, through the interaction of the student's own cognitive state, emotions, and actions. The student absorbs and imitates many aspects of the teacher's behavior. This is related to the idea of modeling as a teaching tool; however, it is more endemic. In this capacity, imitated behaviors may appear some time later, in the form of "delayed imitation." First articulated by Albert Bandura as *Social Cognitive Theory*, this perspective places the totality of the studio environment into an important learning context (Miksa, 2008).

The "joint-problem solving" relationship between teacher and student can be seen to possess certain recognizable properties. The teacher uses his/her knowledge of the student's abilities to formulate a targeted path of progress which is tailored to the current skill level of and goals of the learner. If teacher creates a challenge which is appropriate to the potential for improvement, the student feels motivated and inspired by an attainable goal and contributes their energies to the solution. Conversely, if the task is too far

beyond the student's reach, or too simple to provide adequate challenge, boredom, anxiety, or a drop in self-esteem may stymie progress.

Early 20th Century Russian psychologist Lev Vygotsky provided structure for this interaction with an optimal learning mode he termed the *Zone of Proximal Development* (ZPD), a concept which roughly maps the intersection between what a teacher knows and how much of that information can be effectively absorbed by the student at a given moment (Kennell, 1992). Vygotsky described it as "...the distance between the actual developmental level...and the level of potential development as determined through problem solving under...guidance" (Vygotsky, 1978, p. 86). This emphasis on the use of appropriate challenge to motivate learning in the student is related to *flow theory*, which is investigated more fully later in this paper (see "Music as the Focus of Attention").

While it is key for the teacher to be adept at honing in on this zone, success is not as simple as opening this door for the student. There is an important emotional and psychological component as well. In order to proceed *into* challenge, the learner must feel safe and free from anxiety or fear. Such levels of confidence have complex origins, but are due at least in part to the rapport between student and teacher (see "Rapport in the Applied Studio"). In this way, aspects of the teacher's demeanor or overall teaching style may play pivotal roles in student success (Mahn & John-Steiner, 2002).

Confidence, or a feeling of "self-efficacy," emerges when the individual not only possesses skills, but believes she/he can be successful in implementing them. The most productive and motivational self-image is one which slightly surpasses the individual's actual skill level. Students will be most effective in performance if they believe they are

somewhat better than they actually are. The best way to promote high levels of self-efficacy is through *doing*. The student needs to have positive experiences which exemplify the target skill. Secondly, self-efficacy can also be bolstered through observations of others, verbal praise or other reinforcement, and positive affective states. Challenging proximal goals are suggested as a means for improving self-efficacy in learners (Artino, 2006). Positive student-teacher rapport has also been linked with promoting student confidence (Clemmons, 2007).

These issues point to the holistic nature of the ZPD as dependent not only on physical skills acquisition or knowledge transference, but also on positive affective states and psychological climates. In this way, access to the ZPD is not simply an accurate assessment of the student's current potential for improvement on the instrument, but a form of *empathy* in which the teacher tunes into the complete state of the student at a given time. Gholson (1993) describes this as an imaginative process in which the teacher places, or *positions*, herself in the physical, emotional, and mental role of the student. From this perspective, the teacher is more able to survey the issues which would prevent the student from realizing a proximal goal and can therefore more closely align her scaffolding strategies to the needs of the learner. The ability of the teacher to practice this form of empathy, or *proximal positioning*, may impact student success.

Rapport in the Applied Studio

Social connections between teachers and their students are also be described as *rapport*. Brookfield (1990, p. 163) states that when trust in the teacher's abilities is absent, students are "unwilling to submit themselves to the perilous uncertainties of new

learning. They avoid risk. They keep their most deeply felt concerns private. They view with cynical reserve the exhortations and instructions of teachers.” A number of studies have targeted social relationships as an extremely influential and important facet of the one-on-one teaching setting (Abeles, 1975; Abeles, Goffi, & Levasseur, 1992; Clemmons, 2007).

Despite this, rapport in music settings is an under-researched topic. Working definitions have been gleaned from psychotherapy and counseling disciplines, where more literature is available. Several teacher-driven behaviors which have been identified as relevant to applied music are empathy and understanding, positive encouragement, open and productive communication, personal authenticity, fairness, lack of an overbearing use of control, and the maintenance of a positive learning environment which communicates acceptance and caring for the student using both verbal and non-verbal cues (Chang, 2001).

Clemmons (2007) investigated rapport in the studios of four master voice teachers and identified four primary themes which appeared to be common to all of the subjects. First, the teacher’s expertise in the field engendered trust and admiration from their students, which in turn promoted the confidence needed to undertake the learning process. This was seen as an important first step which then progressed into more complex facets of rapport. Second, students felt that the studio was a safe environment characterized by mutual respect and interest. Teachers made specific efforts to encourage these feelings, which included making eye contact and listening to student opinions, welcoming students to the room with enthusiastic smiles, and treating each student as an individual. Third, teachers communicated clear boundaries, including expectations of

performance, so that students knew what types of behaviors and outcomes would be regarded as successful. Lastly, teachers taught with an enthusiasm and energy which was seen to positively affect student motivation and confidence levels.

Behaviors: A Montessori Perspective

Teacher as “Guide”

“Maria Montessori advises us to *follow the child*” (Kagarice, 2008, p. 60). In a Montessori classroom, the “focus is on children learning, not teachers teaching” (The International Montessori Foundation, 2007). The teacher acts as a mentor, guide, coach, or friend, but does not engage herself as the focus of attention through lectures or other teacher-centered methods. Instructions are kept as succinct as possible, but carefully planned in order to give the student enough information to ignite curiosity and encourage further, self-directed exploration of the subject. The needs of the learner take precedence over pre-set lesson plans and the independent nature of the child is given space to roam in a student-centered environment. This apparent lack of structure, at least from the standpoint of modern norms in education, may appear haphazard; however, Montessori asserted that significant teacher training was required in order to effectively implement such an approach (Lillard, 2005).

A Montessori teacher fills several functions. First, she is a keen observer of behavior. By watching the student and acting in concert with his/her natural momentum toward learning, the teacher channels the intrinsic curiosity of the child into naturally engaging and challenging experiences. This is an “art” in itself, as it runs contrary to the natural impulse to impose one’s opinions on others, but it is perhaps the most important

skill for the teacher to learn (McCormick-Rambusch, 2007). Second, the Montessorian is an architect of the classroom. While the child is given free reign to explore what the space has to offer, it is the teacher who constructs the playing field. This is purposeful and strategic. All items in the environment are carefully chosen and placed to entice and interest the learner. Although this may appear to outside observers as a very detached approach, the teacher is facilitating learning through purposeful indirect involvement (Loeffler, 1992).

A Montessori teacher is also an exemplar. While she takes her cues from the child, she renders assistance when it appears necessary (Montessori, 2007); however, this form of guidance differs from traditional student-teacher dialogues. A Montessori education is based on “doing.” If something is to be learned, it is to be experienced. This transforms the abstraction of knowledge into real, living experiences rife with contextual meanings and connections (Lillard, 2005). In this process, the teacher is the guide. She shows rather than directs, and facilitates rather than explains. She also functions as the ideal model for behavior, and endeavors to lead by example in all areas of social interaction (McCormick-Rambusch, 2007).

Because the demands of living in modern culture require flexibility and adaptability, another important task for the Montessorian is protecting the child’s right to learn, and in so doing, helping them to understand how to learn (McCormick-Rambusch, 2007). This is essential for long term success in any endeavor or career path; however, the strict expectations of schooling in its traditional form often fail to take into account that students may need cognitive and creative tools in order to keep up (Greene, 1995). Valentine (2006) connects this issue to his experiences with dystonia, claiming he had to

“learn how to learn” in order to overcome the rigid mental perspectives which had locked him into a state of physical distress. In our zeal to improve and excel, musicians may fail to pick up the essential meaning of our craft, thereby virtually guaranteeing future loss of skills. Montessorians act as an advocate of their students with the intent of preventing such outcomes (McCormick-Rambusch, 2007).

This perspective regards the teacher as inhabiting a fundamentally different role than in the traditional classroom environment. Whereas the “teacher who instructs...imposes herself as a superior being” (Montessori, 2007, p. 44) and is guided by the need to control and direct, a Montessori teacher acts *in service* to her students. Her purpose is to anticipate and fulfill the child’s needs. This requires a fundamental shift of philosophy, or what Montessori referred to as “virtue.” A teacher accustomed to the “old” way of educating cannot simply change her classroom behaviors, but must first transform her own opinions.

The greatest goal for a Montessorian is to reach a point where the student can work without assistance. By cultivating a sense for when to intervene and resisting the temptation to constantly step up, rescue, or lecture, the teacher can facilitate self-directed learning (Montessori, 2007). In turn, students experience their own self-efficacy, gain independence, and work diligently even in the absence of constant supervision (Loeffler, 1992).

Constructivist Teaching

In the broadest sense, the Montessorian perspective is a branch of the constructivist movement in education in that knowledge acquisition of is viewed as

taking place within the internal state of the learner, through the building of cognitive connections, rather as an external body of information to be dispensed the teacher. Because constructivism is aimed at empowering the student to function independently both in and out of the learning environment, it can be difficult to implement in a modern school culture which demands a uniformity of standards, expectations, and performance (Loeffler, 1992).

Given the current culture of education, it can be challenging for any teacher to implement a constructivist approach. For example, classes (or private lessons) are subject to predetermined schedules and so conclude when the interval of time has elapsed, rather than when a particular concept has been covered. In classrooms, students of the same age learn together, even though they may not be at the same developmental or cognitive level. Further, the traditional set-up of learning spaces tend to favor the leadership of a single authority figure, as evidenced by the teacher's desk or lecture space and the students' rows of chairs. Logistically, this quashes student-teacher or student-student interaction as it keeps all parties separated in specific roles (Lillard, 2005). Because of the nature of *private* lessons in music, student collaboration may also be challenging within a studio setting.

Nonetheless, the constructivist perspective echoes some core features of Jan Kagarice's approach. Pogonowski (2002, p. 24) defines the constructivist teacher as a "coach, mentor, or master craftsperson working alongside apprentices." Loyens and Gijbels (2008) target the building of a self-directed learner capable of setting and independently achieving goals through experiential learning as a primary commonality in constructivist literature.

Like Montessorians, constructivists are criticized for failing to adequately steer learners toward the acquisition of specific skills and/or knowledge; however, advocates point out that standard assessments are one-dimensional and do not adequately measure a diversified skill set. In order to gain a clear understanding of what kinds of learning are taking place in a constructivist environment, a variety of variables relative to overall achievement should be targeted. These may include opinions regarding assessment standards, level of student interest in the subject, or degree of self-regulated actions. Student success is a multi-faceted topic and may manifest in more ways than can be measured by external achievement factors (Loyens & Gijbels, 2008).

Making a Match: Motor Learning

A dominant aspect of learning to play an instrument involves the refinement of motor function to a very high level of efficiency. Kagarice expresses her perspective on this subject in terms of the Montessori concept “making a match,” as well as through the lens of Arnold Jacobs’ brass method, *Song and Wind* (Kagarice, 2008). These references point to a number of issues related to motor learning which may help to categorize her approach.

Montessori philosophy views sensory experiences and cognition as complementary and sympathetic. As such, motor learning is used to bolster conceptual or empirical understandings. What a child may not be equipped to correctly articulate in words, she may be able to communicate through manipulating “sensorial” materials. Expression through gesticulation can imply a level of embryonic understanding

articulated via the senses. From this perspective, movement may lead cognition and sensorial expressions may predict direct empirical understanding (Lillard, 2005).

Alibali and Goldin-Meadow (1993) tested this hypothesis and found that fourth grade students who exhibited gestures which were at a higher level than their performance on a math test, benefited from instruction at a higher rate than those whose gestures appeared to match their cognition level. By tuning into the ways in which a child expresses him/herself through movement, sound, or other sensorial acts, the teacher may become poised to guide more effectively.

Based on this philosophy, Montessori classrooms capitalize on sensory experiences. As a component of language acquisition, children are exposed to various types of sounds (and silence) so that they can become attuned to gradations of pitch, timbre, and volume. This is thought to improve listening skills so that discerning speech becomes easier. In addition, a richness of color within the environment is employed to provide learners with a wealth of sensory stimulation to prompt richly formed verbal descriptions of the surroundings. For example, trinomial and binomial cubes, or tactile puzzles exploiting basic relationships in geometry, are used to boost conceptual comprehension of mathematics. Similarly, solving tracing, labeling, and coloring the pieces from a map puzzle forms the precursor to learning geography. Throughout the process, the mind and senses experience equal involvement, such that cognition forms around sensorial feedback (Lillard, 2005).

In cognitive science, this is called “priming,” which means that people perform better on tasks for which they have been subconsciously prepared. Prior experiences,

whether superficial or conceptual, form “implicit memories,” or memories without conscious awareness, which can be accessed for problem-solving tasks even if the person is not aware of them. In fact, verbal instructions tend to disrupt focus such that implicit memories are not formed; therefore, the student learns best through a richly detailed experience of *doing* (Verdolini, 2000).

Making a Match in Music

There are parallel thoughts about motor learning as it applies to music.

Automation, also known as *muscle memory* or a *conditioned response*, is regarded as the ideal form of physical mastery on a musical instrument. Once this state has been achieved, even complex technical passages can be performed with ease and consistency because motor function has evolved into a habitual response to musical thoughts and is no longer under the (comparatively slower) domain of conscious mental control.

Initially, skills acquisition requires careful, deliberate practice centered on calculated or controlled movements, but once the body has learned a target skill, action is most efficient when the individual releases conscious control over the musculature. When motor skill mastery is achieved, goal-oriented thoughts focused on the desired outcome (such as the sound of a target musical phrase) trigger nerve centers in the brain to execute the skills necessary to meet the given challenge. Movements executed in a state of automation are more efficient, graceful, accurate, and agile than can be achieved through conscious awareness (Buck, 1944; Sloboda, 1985; Bloom, 1986; Barry & Hallam, 2002; Kutz, 2003).

Specifically, the developmental stages of motor skill acquisition have been identified as progressing through three stages, as follows:

In the cognitive-verbal-motor stage, learning is largely under cognitive, conscious control, requires effort, is deliberate, and may require verbal mediation. During the associate stage, the learner begins to put together a sequence of responses to produce a desired outcome. This becomes more fluent over time. In the autonomous stage, the skill becomes automated and appears to be carried out without conscious effort. (Barry & Hallam, 2002, p. 156)

The benefit of motor-automation for musicians is that the mind can be free to focus on the music while the body implements the necessary physical skills to accomplish the task. This allows for artistry and creativity to become an inherent aspect of the music-making process (Bloom, 1986). Weast (1979, p. 18) states:

Natural performance is the result of nearly perfect synthesis of mind and physique. Its antithesis occurs when the conscious mind attempts to direct the intricacies of physical action. This is the realm of the unmusical player.

Given that music is an art form which communicates without words, the skills required to perform it may not be efficiently transmitted or taught through speech; rather, learning the physical movements associated with playing is a function of hearing what those actions should *sound like*. This involves a natural sensory feedback loop between the brain and muscles. First, musically-oriented thoughts in the brain trigger motor messages which are sent to the muscles. Both during and after the action, the muscles return sensory information to the brain, which then adjusts the course of the movement as needed to compensate for inaccuracies or changes in the environment. If the musician imposes direct cognitive control over the movement, the neural pathways become

clogged with unnecessary information. Actions become clumsy, sluggish, and inaccurate (Fletcher, 2008).

Like Montessori's assertion that sensorial experiences lead understanding, from this perspective movement is directed through *hearing* the target phrase, rather than through visualizing or directing the movements necessary to realizing it. Likewise, the performance of a phrase does not have to be expressed through words in order to be understood; rather, the teacher can employ demonstration as a tool to communicate musical goals. This perspective was primarily disseminated in the brass community by Arnold Jacobs. Although his pedagogy will be discussed at length later, it is helpful at this point to look at his practice of teaching through *imitation*.

Vocal scientist Katherine Verdolini articulates this concept as *controlled* versus *automatic* processes, which may be more roughly stated as “attentional” versus “nonattentional.” In a *controlled* learning model, the teacher gives direct statements about certain aspects of physical musculature and the student works to incorporate these consciously into practice. There are several potential drawbacks of this method. First, bringing attention to an undesirable muscular function through a verbalization may actually increase rather than decrease its habitual nature. Second, verbal solutions may simply be too slow to meaningfully affect muscle movements in real time, and third, contrived and controlled movements may have less personal meaning to the student and therefore are not as likely to be meaningfully absorbed. Conversely, in an *automatic* paradigm, the student discovers solutions for him/herself as a specific task or goal is imagined and attempted (Verdolini, 2000). Holding (2008) comments “It might be

concluded that in order to bring forth functionally fluid singing, we must invoke the ideal of emotionally expressive singing in order to realize this goal.”

Music as the Focus of Attention

The ability to focus one’s attention on a target subject has long been an important topic of many learning theories; however, in order to gain a meaningful understanding of this concept as it pertains to Jan Kagarice’s philosophies, we must look at it from a Montessorian’s perspective, where attention is not enforced, but a product of intense interest in what one is doing. Despite the fact that the human mind, especially the young mind, has a tendency to wander incessantly, an internal resolve to solve a problem, or a deep connection to an action or expression, elicits a sense of serene calm as the individual becomes “deeply absorbed” in the activity. In this state, the learner is almost undistractable from the task. Montessori viewed student’s focus of attention as fundamental to learning, so much so that her method has been called a *pedagogy of attention* (Sobe, 2004).

Concentration is not a one-dimensional state. In order to learn complex topics or skills, the student needs assistance directing their focus. “They must learn what to look at; their action must be directed to the right cues” (Richardson, 1992, p. 156). The use of attention as a teaching tool does not stop with simply sparking the curiosity and getting the student to engage; rather, the connection must be meaningful, purposeful, and rich. The teacher must know when to step in and assist, and when to retreat so that the student can work. Excessive praise, for example, often serves unproductive ends as it pulls attention away from the task and breaks concentration. Likewise, too much explaining

not only provides distraction, but may also corrupt the student's ability to build her own understanding. Once a concept is given a name, the learner may stop looking for other meanings as comprehension is limited by the parameters of the label (Bamberger, 1991).

Drawing on the theories and practices set forth by French psychologist Édouard Séguin, Montessori (1912) suggested an ordered structure – termed the *Three Period Lesson* – for directing students' focus of attention toward an optimal mental state which is conducive to learning. Firstly, the environment should be staged so as to promote attention to the target concept. For example, in teaching colors to children, the materials used should be identical in every way except for variations of hue, which are ideally contrasting in order to emphasize their differences. The objects are then referred to by their color only, such as “blue” or “red,” rather than their color and corresponding structure, such as “the blue tablet” or “the red tablet.” This isolates “color” – the learning target– from all other aspects of the environment.

Montessori described this as a *pre-stage*, or a form of *self-education*, in which the child, through exploration and/or play, observes a particular phenomenon or concept and notices or discovers its qualities and characteristics. She describes this as “the acquisition of a fineness of differential perception” (p. 178). It is the ability to distinguish gradations and to understand that “red” is in fact unique from “blue,” even if no name has yet been given to describe the difference. Simon (2001) codifies this idea as “the habit of examining the environment for interesting pattern,” which is clearly desirable in the context of music listening and learning. Although this capacity generally develops naturally in normal children, Montessori asserts that the teacher can facilitate it by placing key objects in the environment for the student to experience (Montessori, 1912).

The first period of the lesson is then a process of connecting sensory perceptions with meaning. To follow again the example of learning colors, the Montessori teacher points to each example and identifies it by name (“blue” or “red”). This is repeated several times in various orders so that the child has the opportunity to observe and absorb the information without pressure or stress. In the second period, the student practices recognizing concepts. The teacher asks, “hand me the blue” or “hand me the red.”

In the third period, the concept has been absorbed and can now be used freely. The teacher reverses the concept and asks, “What is this?” The student is then equipped to function independently by responding “red.” In this model, learning is a process of discovery in which the individual is given ample time and space to explore and practice so that the information is fully absorbed before the student is asked to implement it (Montessori, 1912).

Relating Montessori Instruction to Broader Learning Theories

One of the primary goals of the Montessori strategy is to foster a deep, experiential involvement in the learning process. Rothunde (1991) links this conceptually with Csikzentmihalyi’s theory of *flow*, or optimal experience. In a *flow* state, the individual is so connected to their work that action and awareness become merged and the ego falls away. They do not notice the passage of time and have a sense of mental clarity about how to proceed. Motivation is not derived from extrinsic rewards or recognition, but through an authentic engagement with the experience itself, which is to say that the activity becomes *autotelic*.

Custodero (1997) uses the model “high challenge + high skill = flow” as a means to characterize the appearance of flow within the context of musical study. This is congruous with the Montessori notion of the “teacher as guide.” Rather than simply monitoring or assessing the achievement exhibited by students, the teacher intervenes or provides feedback only when invited by the student (either verbally or through behavioral cues) or when it is necessary to re-state certain parameters or details relevant to the activity. She describes the types of feedback which are conducive to promoting flow:

Important in these...interactions is the avoidance of unsolicited intervention—interrupting children’s involvement with their own process impairs their ability to sense potential control of the task and impedes flow. (p. 176)

In addition to proving a medium for creativity and deep learning in the immediate, reaching flow frequently over time teaches the student how to learn, so that authentic experiences become a lifelong habit. Because flow is a form of engagement with the environment, teacher behaviors will impact whether or not students attain or experience it. The learner must be presented with clear and appropriate goals and then given the space to connect with them (Rothunde, 1991).

Similarly, metacognitive skills, or an understanding of the learning process, are seen as an important aspect of motivation, particularly as it pertains to the necessity for music learners to engage in independent practice time. Whereas younger musicians are primarily motivated to practice by external issues, such as grades, and are not adept at error-detection within their own playing, experienced players tend to function more efficiently in practice because they have extensive knowledge of both technical and expressive issues and can evaluate their own performance more comprehensively and

accurately; therefore, teaching students how to learn and/or teach themselves through practice should be pursued concurrently with skills acquisition in music (Barry & Hallam, 2002).

Bain (2004) echoes a similar notion with the idea of extrinsic vs. intrinsic motivation. If the student is offered external rewards (such as verbal praise or grades), they are likely to perform well or apply themselves fully only when that incentive is present. Conversely, if the learner is fueled by an innate desire to engage with the activity for its own sake, meaning they are *intrinsically* motivated, progress becomes a natural byproduct of their interest level in the activity. In order to encourage this type of engagement, the teacher can motivate by modeling genuine enthusiasm for the subject matter and exposing students to the core questions, conflicts, and discoveries which it evokes. Palmer (1998) refers to this as a reverence for the “grace of great things,” or a “subject-centered” approach to teaching. There appears to be a consensus within the literature that when an activity is *autotelic*, or pursued for its own sake, there are positive learning outcomes.

Content: Schools of Thought in the Applied pedagogy of Brass Instruments

Early Pedagogies

Brass pedagogy has a somewhat shorter history than that of other orchestral families. In the 17th-18th Centuries, brasses fulfilled a utilitarian function, especially in Germany, where they were used to communicate information from watchtowers or to mark the passage of time from a town square. As such, players were members of trade guilds and teaching practices were closely guarded secrets passed down through an

apprenticeship model. The first pedagogical text, written by trumpeter Girolamo Fantini, was not published until 1638, and it was almost 100 years before a second book was penned by Altenberg (King, 2004).

In 1864, the first comprehensive method for brasses was published by Johann Baptiste Arban, a cornet student at the Paris Conservatory. This text is widely known and used by brass players on all instruments, primarily because it is a virtual anthology of technical studies. Interestingly, this feature may be more of a reflection of marketing trends in that period than of any pedagogical intentions on the part of its author. With the invention of the lithograph and high-speed printing machines, late 19th century teachers clamored to publish seminal texts within their respective disciplines. Extensive technical information or clearly delineated drills were often used as a means to distinguish the method from all others carve out a niche within the field. The onslaught of books in this vein eventually facilitated a systemic shift away from the historical model of teaching through imitation, modeling, and ear training, and toward a pedagogy focused on the acquisition of technique (McPherson & Gabrielsson, 2002).

The influence of Arban's book on brass players is likely immeasurable. Many of the most accomplished performers of the last century, including tubist Arnold Jacobs (Call, 2000) and trumpeter Don "Jake" Jacoby (1990), recall that their early lessons were derived from this book. In fact, the same can be said for the author of this paper, who began playing in 1984, one-hundred-twenty years after the first edition of Arban's method.

Arban offers general advice on the physicalities of playing, such as where to place the mouthpiece on the lips (2/3 upper, 1/3 lower), but he strongly asserted that no student should be forced to conform to a specific embouchure if their personal facial structure was not conducive to it. Further, once a particular placement had been learned, he warned that changing it would only lead to frustration and loss of skills. He advocated a pressure-based approach which prescribed increasing the force between the player's embouchure and the instrument as a means to "shorten" the vibrations and facilitate ease in the upper register (Arban, 1936).

Another early method was compiled by Henry Freistadt using the drills and studies of his teacher, Russian trumpeter Max Schlossberg. While this book has remained an important source for targeted technical studies, actual lessons with Schlossberg are thought to have been far more personalized to the needs of the student. In the initial meeting, he would "diagnose" the player's level and prescribe specific drills intended to strengthen any weaknesses, especially in the areas of breathing and attacks. While the book contains *examples* of his methods, it is not possible to know or recreate Schlossberg's application of them. Nonetheless, even today, repetition of these studies is regarded as an effective path to technical facility on the instrument (King, 2004).

Reinhardt's Pivot System

In 1942, trombonist Donald Reinhardt published the *Encyclopedia of the Pivot System*. Unlike many of his predecessors, his book leaves little room for ambiguity, as he goes to great lengths to clarify his ideas in text form. In fact, there is no notated music in the over 300-page text. Although well known contemporaries Herbert L. Clarke and

Charles Colin were enthusiastic supporters, many players eventually expressed deep objections to Reinhardt's ideas, and the Pivot System became the most contested method of the 20th Century. In truth, his book contains such a high level of detail and specificity that it provides ample grist for disagreements (King, 2004). This quality situates it as an important precursor to writings from 1950's onward, which primarily favor a behaviorist's view of brass teaching (Loubriel, 2006c).

In the preface to his *Encyclopedia*, Reinhardt recalls his own hardships and successes as a musician, and credits these experiences with the genesis of his theories. Despite studying with what he refers to as eighteen "so-called" teachers who offered only "stupid suggestions," he suffered from a chronic lack of acceptable range and endurance; however, after a repairman inadvertently left the counterweight (which keeps the instrument from falling forward) off his horn, the resulting downward tilt of the trombone immediately facilitated the acquisition of his high register.

Reinhardt concluded this breakthrough was a direct result of the altered playing position. In order to better understand this effect, he scrutinized closely the embouchures of every available brass player, and employed metal rods bent into the shape of mouthpiece rims so that he could see the embouchure buzz in action (Reinhardt, 1973). This device was later marketed by trumpeter/instrument-maker Vincent Bach and became the widely popular "mouthpiece visualizer" which fueled the assertions of many later texts in the field (King, 2004).

From his inquiry, Reinhardt concluded that certain dental configurations resulted in the blowing of the air stream either in an upward or a downward direction relative to

the lips. From this, he developed four standard types and five subtypes of embouchure and jaw classifications. Once a player's type was diagnosed, he prescribed a specific "pivot" in which the "inner embouchure," or the contact points where the inside of the lip meets the rim of the mouthpiece (also known as the "four legs"), is moved either up or down to facilitate register changes.

Behaviorism, or "This is what you should *look* like when you play."

Reinhardt made numerous allusions to his work as "scientific" in nature; however, his methods were based not on quantitative data, but on personal experiences, observations of professional players, and his own teaching practices. This notable emphasis on empiricism, coupled with his presentation of himself as "Doctor Donald Reinhardt" (his degree was honorary), may have been an attempt to align himself with social and educational trends in a more general sense, which favored the standardization of quantifiable results.

This perspective follows from the Lockean notion that the student is an "empty vessel" to be filled, meaning that knowledge is broken down and separated into discrete units which can be quantified, drilled, and memorized. Historically, this philosophy, which is generally identified as being *behaviorist* in slant, has been easier to sustain in educational environments because it is testable, consistent, and clearly-delineated (Lillard, 2005). Behaviorism is a branch of psychology which codifies human actions according what is observable and eschews factors, such as cognitive structures or emotions, which are hypothetical in that they can only be inferred to exist. Actions are seen as discrete, observable phenomenon which can be manipulated and controlled

through the correct application of stimuli (Torff, 2006). These ideas characterize a hugely influential branch of brass pedagogy (Loubriel, 2006c).

Although his method was controversial, Reinhardt's text might easily be seen as seminal in the behaviorist vein as several later developments appear to have originated with it. First, Reinhardt's instructions are extremely precise and detailed. The closing section of his book summarizes his method in thirty-five "concise" points, most of which are multi-faceted, very specific, and require knowledge of his lingo. For example, point number twenty-nine offers a six-part analysis of the "duties" of the tongue during all phases of breathing and playing. Part five states, "[The tongue] must snap back (and down in some cases) into your mouth to permit the cone-like air column to move forward to create the essential lip-vibrations for the particular range being played." Such levels of specificity became easy fodder for subsequent commentators to disagree about the details of playing and prompted a lengthy battle over what "proper" playing should *look* like.

Second, the pivot system is a "mechanical approach," meaning that *technique leads and music follows*. The student must gain "a thorough understanding of the correct functions of the diaphragm and abdominal regions, correct tongue manipulation, correct embouchure development and everything that pertains to the physical side of playing," (Reinhardt, 1973, p. 2) before the realization of a musical idea is possible. Somewhat ironically, Bush (1962) referred to this same notion as an "artistic approach," in that it frees the player from the mechanical distractions which impede expressive playing at later stages of development.

Third, Reinhardt was very critical of what he termed a “traditional musical approach,” in which the student is presented with progressive musical challenges and generalized metaphorical statements about expression, breathing, or technique as a means to advance both musicianship and technique simultaneously. His primary objection was that this approach had failed to solve his own problems, and therefore, was not a *guaranteed* path to success. By contrast, Reinhardt asserted that a “scientific” analysis of proper playing would demystify the process and eliminate the “playing secrets” usually incorrectly labeled “talent.” (p. 236) Mastery was therefore open to any player willing to systematically apply the appropriate pivot techniques. The idea that a single physical approach will work for all players and that any playing malady is completely “diagnosable” and “fixable” later became common to behaviorist teachers (Farkas, 1962).

Phillip Farkas and Other Behaviorists

Although he was a staunch critic of Reinhardt, Chicago Symphony French hornist Phillip Farkas’ book *The Art of Brass Playing* (1962) follows suit in a number of ways. Like his predecessor, Farkas criticized the vague statements of yore, such as “put the horn up to your mouth and blow,” and favored a specific, codified approach to recreating a mandated physical configuration, which he referred to as the “Brass Player’s Face.” Based on photographs taken of his colleagues buzzing on both mouthpiece visualizers and on their instruments, Farkas presented examples of ideal embouchures, which he defined as “the mouth, lip, chin and cheek muscles, tensed and shaped in a precise and cooperative manner, and then blown through for the purpose of setting the air-column into vibration.” The fine-tuning of a proper facial configuration, which he referred to as a

“mechanical contrivance,” would yield endurance, range, speed, consistency, and a resonant tone.

Like Reinhardt, Farkas’ directions are specific and very detailed. Based on the example of a taught drum head, he deduces that tension is a necessary element of a strong and consistent vibration. In order to recreate this in the brass player’s embouchure, he suggests an isometric muscle configuration in which the cheeks attempt to smile as the lips simultaneously pull inward, toward a pucker shape. This “face” was to be practiced both while playing, and away from the instrument while looking in a mirror, a practice which follows the behaviorist notion that knowledge should be broken down and drilled in discrete units. Other directives to be implemented included separating the teeth between $\frac{1}{8}$ and $\frac{1}{4}$ inch, avoiding a bunched chin (“peach pit”), and specific ratios for mouthpiece placement ($\frac{2}{3}$ upper and $\frac{1}{3}$ lower for trumpets, for example). For clarification, he suggested that his readers collect photos of great brass players and scrutinize their faces. He asserted that even in a photo, it was possible to tell who was a professional and who was an amateur based solely on the visual quality of the embouchure.

Dale (1965) also places a heavy emphasis on physiology and asserts that a well-conditioned embouchure is such a powerful tool that the musician need not possess a strong ear in order to be successful. Memorization of the proper muscle configurations will yield pitch-accuracy regardless of whether the player is aurally aware of what he is performing. To achieve this level of physical perfection, Dale points to the path of the airstream as it passes through the embouchure. He advises players to roll the upper lip under slightly so as to butt up against the lower line of the front teeth, thereby placing the

aperture, or the hole between the lips where the air passes through, directly between the upper and lower teeth. This ensures that the upper teeth do not impede air flow. As an additional benefit, Dale points out that this frees the upper lip to act as the primary source of vibration, while the lower lip can then be adjusted as needed to alter the aperture size.

Fink (1977) disagrees with this assessment on the grounds that both lips buzz during proper embouchure use; therefore, focusing on the lower lip for pitch changes is not correct. He cites a “high speed photographic study” completed by Lloyd Leno as proof, but does not provide a full citation for the article. In the absence of bibliographic information, the author of the current paper was unable to locate Leno’s report to corroborate the findings.

Like Farkas, Dale derides the pivot system, stating that it is a means of compensating for the shortcomings of underdeveloped musculature. In its place, he offers a detailed prescription for embouchure function. To play into the high register (which is what most players are concerned about), the upper lip should be rolled inward and pulled backward, as if trying to push the teeth further into the mouth. The lips should then be in a “balanced tension,” pushing into each other equally. In addition, he advises the reader to “think high” while trying to ascend. A similar lip compression theory is offered by McLaughlin (1995), who builds on Farkas’s smile/pucker model with the notion of a “3-D” embouchure. This is characterized by the purposeful creation of a thick aperture “tunnel” that is the byproduct of pressing the lips together. McLaughlin asserts that this enhances ease, range, and especially endurance.

Related to this branch of Behaviorism are Carmine Caruso's brass "calisthenics." Although Caruso did not emphasize the visual attributes of a functional embouchure, he did advocate non-musical conditioning of the musculature. Ironically, Caruso was himself a saxophonist, but many of his students cite this as an asset because it immunized him against the mental "hang-ups" common to brass players (King, 2004). Caruso's exercises are simple but progressive long tones and register studies in which the player maintains contact with the mouthpiece over an extended period time by breathing through the nose. As an important accompaniment, the player is instructed to tap the foot throughout. Caruso believed this provided a constant reference point which allowed the brain to coordinate all the muscles and nerves involved in playing. By keeping the embouchure in its set, tensed position over an extended period of time, the muscles settle into a workable and consistent "balance" which remains stationary, i.e. looks the same, throughout all registers (Fadle, 1996). As with other behaviorists, Caruso asserted that physical conditioning should be undertaken as a means to facilitate musicianship. To that end, he advised players not to be concerned with the quality of sound production as the exercises are intended to be non-musical (Burtis, 2009).

His former students voice caution in using Caruso's method as it has now entered the realm of "general brass knowledge," and in the process, has lost much of its meaning. As a teacher, Caruso was an excellent motivator who was very adept at diagnosing, isolating, and repairing the unique issues facing individual players; therefore, the totality of his pedagogy may not be recreated by the exercises which survive. Simply playing through these "calisthenics" (as many players do) may not only fall short of Caruso's intentions, but could potentially cause harm if done incorrectly (Burtis, 2009).

The *Guide to Teaching Brass* (Bachelder & Hunt, 2002), a textbook for brass methods courses at the college level which is currently in its 6th edition, has been widely used throughout the United States for the past thirty years and echoes many of the core strands of behaviorist teaching. The authors view the acquisition of a resonant sound as a function of a properly formed embouchure, which they characterize as dependent upon the position of the tongue, the size and shape of the mouth cavity, and the quality of muscular tension in the face. The wide use and longevity of this text offers some insight into the amount of influence the behaviorist school of thought has exercised over the community of brass playing across the last half of the 20th Century.

Possible Pedagogical Links to FTSED

Behaviorism views the teacher as a formal authority and an expert in the field. By following specific directives and never veering from them, the student can attain optimal physical placement and therefore, produce a resonant sound with sufficient endurance. This is a much more rigid framework than what is generally regarded as the optimal student-teacher dynamic in the applied studio. Grasha (2002) points out that because learners have different goals and skills, not all will benefit equally from the same approach, especially in a one-on-one setting, where the teacher has the flexibility to tailor the environment to the student's needs. The rigidity of the behaviorist model has contributed to tensions and disagreements in the field, as well as the notion that there is only one "correct" way to play (King, 2004). This may be part of the dynamic which leads healthy players into dysfunction (Vining, 2008).

Are there any benefits to behaviorist methods? A tempered approach is now advocated by the field. The late trumpeter Vincent Chicowicz, who was a colleague of Farkas in the Chicago Symphony, asserted that physical directions can be helpful, but must be used sparingly. If the teacher can provide a practical way to approach something through the physiology of playing, he/she should explain it; however, misuse of this information can occur when the symptoms of good playing are employed as a starting point. While certain physical configurations may be observed during efficient playing, recreating those symptoms separate from function will not produce equal effects. This is primarily because the actions which can be observed during playing are only a very small part of the comprehensive sound production system employed by the player. Chicowicz views the behaviorist texts as helpful, but incomplete (Loubriel, 2006c). Interestingly, Farkas also conceded that good brass teaching might better be accomplished not through *looking at*, but by *listening to* students. (Farkas, 1962)

From this perspective, an over-reliance on behaviorist directives, and not the concepts themselves, may be to blame for the increasing occurrence of dystonia in brass players. Further, certain personality types may be more prone to falling into this trap. A study performed by medical doctors Jabusch and Altenmuller (2004) concluded that feelings of anxiety and perfectionism were more prominent in dystonic musicians, than in healthy musicians. Based on these findings, it is not difficult to understand why dystonic players are usually high-achievers who are overly fixated on improvement and subject their bodies to intense physical training under high stress conditions (Byl, 2006).

Further, a perfectionist mindset may only be exacerbated by the behaviorist notion that playing is physically very difficult to achieve. Bush (1962) describes mastery as a

“long and difficult task” (p. 7) which can only be accomplished through proper muscle conditioning and years of practice. Without this, he asserts, the player will never develop accuracy and/or sufficient endurance. Such notions lead eager players to focus extreme levels of conscious attention on the formation of their embouchures. This can contribute to the onset of dystonia because misplaced sensory information going into the brain overloads the natural flow of motor commands which should be flowing out. As a result, the muscles and brain fail to communicate correctly, and movement becomes (sometimes permanently) dysfunctional (Fletcher, 2008).

What is Focal Task-Specific Embouchure Dystonia?

Focal Task-Specific Embouchure Dystonia is a neurological movement disorder characterized by the loss of function in extensively trained motor skills. Sensory perception and sensorimotor organization are not correctly interpreted by the brain and the affected muscles misfire and spasm involuntarily (Byl, 2006). “Task-specific” means that symptoms appear only when the sufferer is engaged in the aggravating activity, and “focal” refers to the fact that the dysfunction is isolated to a specific part of the body. For brass players, involuntary muscle spasms impair the embouchure such that playing may no longer be possible, but other actions, such as eating or talking, are generally not affected (Fletcher, 2008). Dystonia also impacts other instrumentalists, appearing for example in pianist’s hands; however, brass players appear to display the lowest recovery rates (Jabusch & Altenmuller, 2006). The condition is usually painless, with symptoms varying from person to person. Some examples in brass players include involuntary closing of the jaw or extreme tension in the lip area, especially at the corners of the mouth (Byl, 2006).

Dystonia is a form of maladaptive “neural plasticity,” or alteration of the neural circuits in the brain, resulting from the repetition under “stressful and demanding conditions” of the motor functions associated with playing. This means the brain’s structure has actually changed to accommodate the dysfunction. Once these neural pathways have been forged, they cannot be corrected by any known medical intervention. Only a complete retraining of the mental, emotional, and physical skills used in playing the instrument can restructure healthy function. Sufferers must relearn how to think and behave around their instruments, especially in terms of correctly interpreting and processing sensory feedback. Successful recovery must also include adopting a positive attitude and managing stress (Byl, 2006).

The pathology of the disorder is quixotic. For most players, initial symptoms manifest as minute playing “problems,” such as difficulties with articulations in certain registers, or problems sustaining longer notes. These issues may appear intermittently over a period of years, or may present suddenly. Usually, they are interpreted as “maintenance” problems, and the player engages in a more consistent, rigorous practice schedule. Unfortunately, this only aggravates the problem. Over a period of weeks, months, or years, playing degrades uncontrollably and eventually, performance becomes impossible. All the while, the player is unable to explain why the skills they have spent so many years building suddenly fall apart (Sullivan, 2008). Emotional turmoil is an obvious side effect of the disorder, as many players go into hiding out of pride and a sense of professional responsibility. During the most difficult phases of his experience with FTSED, trumpet teacher Joseph Phelps (2002) avoided practicing around other musicians and did not play his instrument in lessons.

Because dystonia straddles a bridge between the pedagogical and medical professions, it can be very confusing for those experiencing FTSED to find answers and support. The disorder is recognized by the medical community, but a lack of awareness often means that musicians struggle for a significant period of time, sometimes two or more years, before encountering a correct diagnosis (Phelps, 2002). There is no known successful medical treatment, although Botox injections have facilitated modest improvement (and sometimes an increase of symptoms) in small numbers of people (Jabusch & Altenmuller, 2006).

For our part, the brass community struggles with a lack of information and understanding, and often offers an equally grim prognosis. In her book *Broken Embouchures*, Lucinda Lewis (2005, p. 117) reviews the symptoms of a vast array of embouchure difficulties. She offers advice on repairing many of them, but on the topic of dystonia, describes it as “career ending,” and reports that “no cure or therapy exists which will overcome its effects on playing.” Doctors treating embouchure dystonia point back to pedagogical concerns, citing “retraining” as the best treatment, but concede that success in this area is generally “unsatisfactory” (Lederman, 2001). Facing dead-ends from both sides of the fence, brass players who suffer from dystonia often feel helpless and can quickly lose hope of finding a solution (Fletcher, 2008).

Dennis Wick credits focal task-specific embouchure dystonia with “causing a premature end to the careers of some of the most noted players in great orchestras around the world” (Kagarice, 2008, p. 60). Among them are Warren Deck, former principal tubist with the New York Philharmonic (Deck, 2009), French hornist Glen Estrin of the Chicago Symphony and Lyric Opera, and Joseph Phelps, former Professor of Trumpet at

Appalachian State University (Phelps, 2002). Although FTSED has garnered increasing levels of attention in the field, it is not possible to know how many players have experienced symptoms because many musicians remain unfamiliar with the disorder. Further, musicians tend to hide “self-treat” physical problems by working around them. There are no standard testing protocols for diagnosis, and there is a lack of research in both medical and brass fields (Fletcher, 2008).

Behaviorist teachers clearly did not intend for their methods to induce the kind of obsessive attention to physiology which is now believed to be a potential factor in the onset of dystonia. For example, Farkas regarded his text as a sourcebook for troubleshooting, rather than a comprehensive pedagogy. In the conclusion, he refers to a “natural instinct” for brass playing, and cautions his readers that such a capacity is vital for lasting success. He also expresses the assumption that most players will not benefit from careful study of all of the information in the book, but will find success from focusing only on those topics which address specific deficiencies in their playing. Nonetheless, in practice, many brass players have made a habit of chronically implementing specific physical directives. Such levels of focus are contrary to the natural and healthy connections between the brain and motor function and may point to the root causes of dystonic reactions (Fletcher, 2008; Loubriel, 2006; Vining, 2008).

The Conceptual Approach, or “This is what you should *sound* like when you play.”

Although others, such as Carmine Caruso (King, 2004) and Herbert L. Clarke (Loubriel, 2005) make mention of the importance of conceptualizing the sound of the instrument as a means to facilitate a natural learning curve, this concept was primarily

propagated in the brass field by Chicago Symphony Tubist Arnold Jacobs. Unlike many other methods, Jacobs' teaching has been almost universally embraced within the brass community (Stewart, 1987). Given that his ideas do not stress the manipulation of physiological attributes and therefore are a marked contrast to the work of his contemporaries, this is somewhat surprising. Although the specific genesis of his approach is not known, it is believed that Jacobs' primary influences were Curtis Institute professors Renee Longy-Miquelle and Marceal Tabateau, as well as the writings of Percy Buck, a musician-psychologist, and Arend Bouhuys, a musician-doctor (Kutz, 2003).

Throughout his career, many colleagues and students urged Jacobs' to put his methods into writing, and upon his retirement from the Chicago Symphony, he reported that he planned to publish a book (Von Rhein, 1988); however, in the remaining ten years of his life, this never came to fruition. What we know of his work today can only be gleaned from a patchwork of sources pieced together out of recordings, notes, and commentaries written by his former students. Much of this focuses on adulation and fails to meaningfully address the actual methods employed by Jacobs. (Loubriel, 2005) To further complicate the issue, Jacobs himself remarked that one of the most frequent publishers of articles about him, *The Instrumentalist Magazine*, "got it all screwed up" and failed to accurately report his "style of teaching" or "style of talking" (Loubriel, 2005, p. 5).

Like the work of many other pedagogues, attempts to recreate or replicate Jacobs' ideas after-the-fact may fail to fully capture the nuances of his teaching; however, through a review of primary sources, Loubriel (2005) coded six general attributes of which can be used to describe Jacobs' method. They are: *Song and Wind, the art form of*

music, mind over matter, having one voice in the head and one coming out of the instrument, the evolution of his approach, and teaching with simplicity.

The first, *Song and Wind*, is a guiding concept which frames the other five. *Song* refers Jacob's notion of "singing with the lips," or approaching brass playing as primarily a mentalization of sound, as is done in singing, rather than a manipulation of the instrument. From an acoustical standpoint, brasses have no inherent tone production mechanisms, so they cannot be "played" in the same sense as a piano or a violin. Instead, the tone production mechanisms are a part of the central nervous system of the player; therefore, physical technique is a matter of building conditioned responses to the player's internal concept of sound, or "singing thought mode" (Loubriel, 2005). This is also described variably as "mentalizing," "pre-hearing," or "internalizing" all aspects (sound, rhythm, pitch, dynamics, style, etc) of a given phrase. When attention is consistently focused on this mental image through a process of trial and error, skills progressively improve in an organic, natural way. The mechanics of playing become a sort of "biological reflex" to the dominant musical concept (Nelson, 2006).

Jacobs based his ideas on what he believed to be scientifically accurate information about the functioning of the human body. This may have been related to a general trend in the field toward quantitative data which began in the 1970's (Loubriel, 2006a). He viewed the brain as a highly sophisticated "bio-computer" which was capable of teaching the body to respond in an efficient way if the player focused on the "product" rather than the "method." In other words, one should think about *what* to sound like rather than *how* to accomplish that sound. Through *motor* nerve function, the brain sends a signal to the muscles to respond.

For example, we do not consider or control which muscles are needed to write or to drive a car, even though these physical processes are infinitely complex (Nelson, 2006). Likewise, we do not think about controlling the vocal cords in order to sing a specific pitch. Following this logic, Jacobs' eschewed the physiological trends of the behaviorists, preferring to teach sound instead of *embouchure* (Scarlett, 1999). Within the larger field of applied instruction, this idea is referred to as "thinking in sound," meaning the reading of notation triggers a sound-based thought in the brain, rather than a conceptualization of the mechanical response needed to realize it. In this vein, James Mainwaring, a well-known British music educator and a contemporary of Jacobs, asserted that the process of music learning should "proceed from sound to symbol, not from symbol to sound" (in McPherson & Gabrielsson, 2002, p. 102). Similarly, Gardner (1990) terms this idea "pitch imagery," and asserts that it is congruous with psychomotor theories, meaning it is an effective means for promoting *embouchure* development.

For brass players, *wind* refers to the air flow supplied by the in order to create a medium for realizing, or fueling, *song*. In terms of teaching respiration, Jacobs appears to have used the term *wind* as a means to describe a state in which air is moving freely. This is referred to as the *flow rate*, or "the quantity of air that is required to play a note on an instrument for one minute" (in Frederiksen, 1996b, p. 118). Ideally, the player learns to sense the flow rate which is in balance with the resistance of the instrument and the volume which is being played. Instruments with smaller bore sizes, such as horn and trumpet, move less air, but at a higher pressure, whereas larger instruments, such as trombone and tuba, move more air at a lower pressure. In terms of *wind*, it is important to not to generate unnecessary pressure internally. Jacobs states, "With *wind* there is

always air pressure. With air pressure, there is not always *wind*,” meaning if the air flow is under too much pressure, i.e. more than is needed for the instrument to intone sound, there will not be *wind* (Frederiksen, 1996b, p. 119).

Jacobs extrapolated his views regarding respiration based on his understanding of human anatomy, and asserted that many existing texts and teaching methods had disseminated significant misinformation this area. For example, a common idea, and one which appears in Reinhardt’s *Pivot System*, was that the diaphragm could be contracted during exhalation through an isometric relationship with the abdominal muscles. Conversely, Jacobs asserted that the diaphragm is solely involved in inhalation and returns to a relaxed position during exhalation. For this reason, Jacobs asserted that the “tight gut” approach to exhalation, which is characterized by use of the Valsalva maneuver, in that it results in far higher air pressure than is needed to play a brass instrument. In order to manage the excess, the body will respond by closing the throat, which is counterproductive in terms of moving *wind* (Frederiksen, 1996b).

In order to train respiration, Jacobs focused primarily on breathing (rather than blowing) and often employed external devices as a means to provide a visual target for the player to manipulate as they worked to increase air flow. For example, air bags are used to measure vital capacity (the amount of air the lungs can hold) or for “rebreathing” exercises in which the lungs are emptied and filled in succession in order to encourage expansion and reduction to work separately. A device called a “breath builder” is a tube of plastic in which a ping pong ball moves up and down as the individual inhales and exhales. This sensitizes the player to the movement of the air so that both the inhale and exhale can be elongated (Frederiksen, 1996b).

The second characteristic of Jacobs' approach, which is a focus on the *Art Form of Music*, prompted him to view musical instruction as a process of training artists, or “storytellers of sound,” rather than “players” of instruments. He states:

It is very important that we study emotions in music, style characteristics in music, the art form of music. You can make people laugh, you can make people cry...you have all sorts of abilities to communicate and tell a story through sound (Frederiksen, 1996b, p. 139).

This is also linked to motor skill acquisition as it is defined through the *Song and Wind* concept itself. Because music is a form of communication, the player must focus on imparting ideas through sound. If, by contrast, the player is internally focused, meaning consciously directing the movements required to make sound, the “chain of commands” which control tone production in the body are short-circuited. Jacobs felt this occurs when players become distracted by *sensory input* rather than *motor function*. If we focus on the information coming *from* our nervous system, i.e. what the muscles are *doing* or feel like, we cannot use the instrument as a medium for communication, or a means for imparting ideas (Irvine, 2001). Honoring the artistic voice of his students as the impetus behind technical development was an integral part of Jacobs' approach (Loubriel, 2005).

A third concept, termed *Mind over Matter*, describes Jacobs' assertion that it is the mental focus of the player rather than specific physical attributes determine the musical product. He believed that the internal musical concept of a great player, such as his friend and colleague Bud Herseth, is so powerful and well-defined that it can generate beautiful playing regardless of physical limitations. Hypothetically speaking, if Herseth

were suddenly transported into the physical body of a young student, his ability to “think in sound” would still prevail.

This perspective is related to Loubriel’s fourth observation, which he describes as *Having one Voice in the Head and One Coming out of the Instrument*. In order for the lips to vibrate at the target pitch, the sound must first be internalized; therefore, the ability of the player to internalize pitch is given more attention than the technical manipulation of the instrument or the musculature. Jacobs states:

I’m not putting the embouchure down, but we cannot teach embouchure. We are all born with lips, and lips develop as we play music. They become what we call embouchure, but embouchure comes into being through the music we play, not by mechanical procedures (Frederiksen, 1996b, p. 124).

The last two points, the *Evolution of Jacobs’ Approach* and *Teaching with Simplicity*, are also related. Although Jacobs was intensely interested in medical research as it pertains to respiration, he rarely conveyed this information specifically to his students. Over time, he saw that the simplest directives were the most efficient way to control the complexities of operating an instrument. In his own words:

The human body is perhaps the most complex “machine system” on earth. However, complex systems have simple controls (like a car). In the human body, the simple controls are in our brain so you can be free to cope with life outside us and not inside us (Loubriel, 2005).

Other Practitioners of the Conceptual Approach

A conceptual approach to music-learning is not unique to the brass field, nor was it new to Jacobs’ generation. McPherson and Gabrielsson (2002) assert that historically, musical instruction followed an integrated approach in which the teacher provided an

expert model for the student to follow, and technique was expanded through musical challenges such as improvisation or composition. The onset of high-speed printing in the mid to late nineteenth century facilitated an onslaught of detailed technical manuals which overshadowed the traditional model of apprenticeship, and in so doing, created a paradigm in which notation was employed as a means to dissemble music into component, drillable parts. As a result, current pedagogies tend to link music-reading with the motor skills required to realize notation, such as *fingerings*, instead of the *sound* which notation is intended to symbolize.

By contrast, in a “sound-to-sound” model, teacher-speak and extensive technical jargon is regarded as unbeneficial in that it detracts from the target musical concept. This is supported by Johnson (2002), who warns that methodological information is more “fascinating than beneficial” and encourages teachers to embrace the artistic, rather than the scientific, aspects of music. In an interview with Louis Loubriel (2006c), trumpeter Vincent Chicowicz echoes this notion, asserting that the physiological symptoms which can be observed in expert players are what happens as the *result* of good playing, not what has to be done in order to *achieve* good playing; therefore, mechanics alone are not an effective instructional tool.

This may account for why Arnold Jacobs’ ideas had such a far-reaching impact on the brass community. Although much of the field has retained some core aspects of the behaviorist view, many teachers have followed Jacobs’ lead and built on the ideas of *Song and Wind*. Fadle (1996, p. 39) states that the basic function of the body is to “let our ideas and imaginations become reality.” Reflecting this organic view of music-learning, Severson and McDunn advocate a form of “sound-to-sound” training in which

the teacher begins at the most basic level of musical statement (perhaps a single pitch for beginners) and instructs solely through modeling and demonstration. The student responds in imitation and is continuously encouraged to refine the quality, timbre, and accuracy of the sound they produce. Over time, as the learner becomes more proficient in their responses, the musical ear strengthened and the physiological wherewithal to execute the desired product develops correspondingly. In order to facilitate this learning model, the teacher must remain focused on the aural progress of the student and provide appropriately paced musical challenges that will progressively expand the student's technical and expressive abilities.

Trumpet teacher Bill Adam also took a conceptual stance on many issues. He asserted that playing is 90% mental and that the mind should stay focused on the desired sound. He also used techniques to activate the imagination as a medium to achieving a physical goal. For example, to promote deep breathing, he would have a student place his/her hand at throat level and imagine that the mouth extended from the nose down to that point. The power of this suggestion would, he asserted, lead to a natural form of open breathing which would occur without mental or physical effort or analysis (Adam, 1975; Menasian, no date).

A Model for Conceptual Teaching

Loubriel (2005) created a theoretical model to codify Jacobs' approach using Cowen's (1996) Spiral Dynamics theory. This is a complex construct which incorporates the gestalt nature of musical mastery. It is based on the acquisition of *memes* (a term first used by Richard Dawkins in 1976) or pieces of cultural information which are

transmitted through either verbal (aural) or behavioral imitation. Csikszentmihalyi (1996, p. 7) describes memes as “units of information that we must learn if culture is to continue.” In a musical context, these are the nuances and norms which have been passed down through historical performance practice. A *valueMeme* (vMEME) is a larger organizing principle, or “package of thought,” which pulls together and combines memes into larger constructs. The “singing thought pattern” vMEME, which is a mentalization of the complete, desired musical sound, as taught and reinforced through imitation, is comprised of four memes, which are: physical aspects (relationship to the instrument), aural skills (the ability to accurately hear pitches), mental image of sounds (the quality of the internal concept), and performance attitudes (expression of emotions/stylistic features). In order for the player to reach his/her full potential, each of these four memes must be addressed, developed, and assessed.

When a brass player performs a resonant tone on his or her instrument, there are a number of skills in use, each of which has to be developed as an individual capacity before it can be put in place as a component of the final product. In this way, each of the techniques involved is both a singular skill-set and a part of the greater whole. This is a definition of a *holon*. Each of the memes which contribute to the “singing thought pattern” vMEME is comprised itself of holons, or component skills. They are (in hierarchical order): a mental image of sound, breathing, buzzing, acoustical properties of the instrument, and tonguing. Further, this “system of holons” is interdependent, in that any improvement/decline in each impacts the others in kind. Loubriel refers to this as upward and downward “causation,” which means positive change can be effected in a

student by approaching an issue via a related meme or holon, as called for by the students' needs and/or existing skills.

For example, a student may struggle to understand and demonstrate a concept of musical sound which is in the style appropriate to a particular piece of music. This is an indicator that the top holon, or *mental image of sound*, is weak within the meme of *performance attitudes*. While the teacher can opt to work directly on this issue, it can also be affected by working on the other component holons, such as breathing. Understanding the pacing of a phrase through appropriate use of the air, for example, would positively impact the mental concept of sound on a given phrase. An “integrated master teacher” is one who employs this construct at every level of instruction, from beginner to advanced students. Loubriel designed the instrument Integral Performance, Educational, and Assessment Approach (IPEA), to assess and track student learning within this paradigm.

The Sensory Approach, or “This is what it should *feel* like when you play.”

In addition to his ideas on pivoting, Reinhardt taught what he called “sensation theory,” in which the student learned to play “primarily on feeling rather than on sound.” This is predicated on the notion that playing a brass instrument provides certain sensory feedback and that this information can be memorized and reproduced as a means to cultivate highly accurate and consistent technique. This idea of *sensory* awareness can range from specific and localized work which centers on the embouchure, to a general kinesthetic or proprioceptive alertness which sensitizes the player to air speed or other aspects of playing.

The use of “feeling” in playing was consistently criticized by Arnold Jacobs because he believed that taking sensory information *in* interfered with the motor nerves which were trying to send musical information *out* (Frederiksen, 1996b). Fletcher (2008) reports that Jan Kagarice expresses a similar view, crediting an overly exaggerated focus on sensory information with the eventual onset of dystonic reactions; however, her concept of *blow* appears closely linked to practitioners of the sensory method. Further, she asserts that there is a natural sensory loop which alerts the brain to changes in the environment and which is necessary to playing. It would appear that the issue is one of degree: *too much information is not helpful*.

Many highly accomplished musicians, even those who predominantly espouse other methods, have commented on aspects of playing by “feel.” Dale (1965, p. 17) describes the sensation of a “grip” between the mouthpiece and embouchure which is felt only when proper placement has been achieved. Weast (1979, p. 34) states, “One must become aware of his use of mouthpiece pressure...[taking] advantage of feedback information to learn the correct amounts for future use.” Trumpet teacher Claude Gordon stated, “the player will learn to feel every note” (in King, 2004, p. 70). Likewise, trombonist Edward Kleinhammer asserts that learning the “sensations of the correct amount of muscular tension needed for each pitch” are an important part of balancing the physical and mental sides of playing. Lewis (2007) asserts that players learn by feel and that sensory perception is a fundamental aspect of the process. She points out that if the feel changes because of overuse or injury, the player can become distracted and tone production may suffer.

Cultivating this idea of “feel” is also described as “noticing” what is happening in the body. Breathing exercises are often approached in this way, where the student is prompted through various means to take a full open breath, then told to become aware of sensations in the torso or throat (Kleinhammer, 1963; Jacoby, 1990). In truth, even conceptual teachers comment on the need for body awareness. In order to teach good posture, Arnold Jacobs instructed students to use their hands to feel the arching of the back which occurs when the lumbar region is properly positioned. He also advised players to sit tall, avoid rigidity in the body, and to be aware of the up and down movements of the rib cage so that chest expansion can feel open and easy. (Nelson, 2006, pp. 35-36)

Based on the tenets of Alexander Technique, Vining (2008) advocates a highly refined version of body awareness, or *kinesthesia*. Likening the refined motor skills involved in playing an instrument to the precision movements of a dancer, he places brass pedagogy in the realm of *somatics*, or “the study of the body in motion.” Igniting, or “waking up,” the kinesthetic sense allows the student to explore the motor functions of playing and maximize efficiency by forming a clear picture in the brain of what the body is doing. This “body map” leads to “inclusive practice,” in which music is learned and studied as a whole body process. This integrated awareness is bolstered by increased attention to the tactile and aural senses, as well as an honest inventory of emotional and affective states.

By becoming aware of kinesthetic feedback, the player not only learns to use the body for maximum efficiency in performance, but can avoid the complications of tension, pain, and injury. These ideas are echoed by Jacoby (1990) who asserts that unnecessary

mouthpiece pressure on one side of the lip can be relieved simply by bringing focused attention to the *other* side. When the body has the appropriate information, it will tend toward efficiency and relaxation.

Sensory Playing: The “Blown” Embouchure

Despite the various dialogues regarding the *feel* of playing, both behaviorists and conceptual-based teachers avoid using this descriptor in reference to the embouchure; however, a third school of thought, which is based in sensory directives, encourages students to become sensitized to the feeling of moving air, specifically the speed or velocity of the air, within all registers and dynamic levels. Fuks (1998) assessed the sensitization of wind players to the internal pressures within the instrument and found that their perception of pressure was proportional to the actual measured level, suggesting that wind players are particularly responsive of this type of sensory feedback.

While the field is in agreement that the speed of the vibrations in the embouchure determines pitch, the means by which this is facilitated remains a point of contention. Whereas the behaviorist perspective views the lips as a contracted membrane that is *blown apart* and manipulated through targeted muscle contractions, sensory-based teachers assert that the opposite is true; namely, that the embouchure is a flexible, elastic medium which is controlled through the *velocity* of the air supplied by the player. The behaviorist model of embouchure training is well-known, but the divergent perspective offered by sensory-based teachers has received less attention, as evidenced by the focus and scope of the text *Guide to Teaching Brass* (Bachelder & Hunt, 2002), which is commonly used in teacher training courses.

Despite the dominance of a tension-based view on embouchure function within the field, the physics of brasses lend some credence to the notion that the embouchure is actually “blown,” rather than *set*, into place, meaning there is no “embouchure” until the player blows air into the instrument (Adam, 1975). This is specifically related to *resonance* – “the transmission of a vibration from one body to another, which can take place only when the two bodies are capable of vibrating at the same frequency” (Bachelder & Hunt, 2002, p. 3).

On brasses, tone production is a cooperative relationship between the vibrations emanating from the embouchure and the resonant frequency (as determined by the length of the tube) of the instrument. When the lips produce a vibration, it travels down the tube as a sound wave and is then reflected back to the player at the bell flare. If the frequency in the instrument and the vibrations of the embouchure match, they create a standing (continuous) wave, or *self-sustained oscillation*. This phenomenon results in *resonance*, meaning the lip-reed and the sound wave in the instrument are vibrating in *sympathy* (Fuks & Fadle, 2002). Resonance is maximized when the embouchure is flexible and capable of vibrating freely (Adam, 1975).

Resonance is also used as a descriptor for an ideal brass tone, meaning one which is rich, full, reverberant, and projected. Players in this state are also thought to maximize efficiency and intonation. Van Cleave (1994) uses the phrase *resonant intonation* to refer to the ability of the player to match the frequency of the embouchure with the resonant frequency of the instrument. This generates the greatest acoustical advantage – the air in the instrument is in maximum sympathetic vibration – and the sound is not only amplified and projected, but naturally in line with the partials of the harmonic series.

Fink (1977) echoes this idea with the assertion that the most resonant tone is also the one which is most in tune.

Trombonist William Cramer (1985), who taught at Florida State University for some thirty years, advocated a concept he called “blow freely” which implies the benefits of a released, flexible embouchure that is set into motion by the movement of the air column. He describes the feeling of resonant playing, which he regards as the most desirable form of tone production:

The performer should feel as though the trombone is an extension of himself. It is as though the trombone plays itself. Indeed, if conditions are ideal, the performer will feel as though he is playing the hall, for the vibrating wave will extend itself to the hall as one continuous vibration....The performer should be very aware of this sensation, and try to recapture it will each BLOW.

Cramer also encourages students not to think of “setting” the face into any predetermined configuration. In the same way as a vocalist does not introduce tension into the vocal chords prior to singing, trombonists should simply “[pass] air between the lips and allow them to respond ...until they begin to vibrate naturally and effortlessly” (Cramer, 1985).

Bill Adams’ view on air and embouchure is also reflective of a sensory approach. While he employed conceptual techniques as a means to foster a clear mentalization of the ideal sound within the student, he also directed players to become aware of air velocity as it relates to the mental concept. As air is accelerated through the tube, the embouchure is set into motion. As this process occurs, “sound production relies on feedback from the horn to the players lips.” (Rossing, 1969, p. 6) Excess facial tension actually hinders resonance; therefore, excessive “holding” of the embouchure is not only

an unnecessary expenditure of effort, but may actually be counterproductive (Adam, 1975).

Trumpeter Don Jacoby's (1990) book *Jake's Method* also advocates a released embouchure. Using very minimal physical directives, such as "use the tongue to determine the direction of the airstream," and "the part of the lips inside the mouthpiece should remain completely relaxed," he advocates a "natural way" of playing which is based on learning to manipulate the air. Through visual cues, such as the idea of blowing out a flame at increasing distances away from the lips, he encourages students to forget about the "proper" formation of an embouchure and "let the air vibrate [the] lip to produce the note." The quantity and velocity of air determine the volume and pitch of the sound.

From this perspective, the embouchure is principally conceived of as a point of balance between the air pressure supplied by the player and the resistance of the instrument; therefore, embouchure tension is a symptom of *over* blowing, meaning too much air and/or pressure is being directed towards the lips, which then compensate by tightening against the flow (Fuks & Fadle, 2002). This contradicts the notion that the facial muscles need to be conditioned through strength-building exercises. Specifically, Adam warned that over strengthening the embouchure causes muscle tension that is both counterproductive and difficult to remedy (Adam, 1975).

Similarly, in a 1989 master class, trumpeter Allen Vizzutti refers to maximum efficiency in terms of balancing air flow with the resistance of the instrument and implies

strongly that this is accomplished primarily through the ability to manipulate the outward flow of air.

Always remember to think fundamental thoughts about playing a brass instrument—it takes air to do it. And the whole key, I have found, to technique, range, endurance and varying styles has to do with how efficiently and with what control you use and have developed your air column. I've noticed, in clinics that I've seen and in printed material, the tendency is to talk about air column in terms of volume—how much can you blow through your horn, how hard can you do it? ...but I've found that efficiency and economy really, really help—and that's where the resistance of the horn has to be matched to the individual player (in Tomkins, 1989, p. 1).

In this model, “free” buzzing -- buzzing of the lips alone, away from the instrument -- or practicing on the mouthpiece without the horn is viewed as not productive. Claude Gordon stated:

Trumpet players who spend time ‘buzzing on the mouthpiece’ are practicing a ritual that has no application to actual trumpet playing and in most cases intensifies unnecessary lip abuse and the false notion that the lips play the horn.” (in King, 2004, p. 67)

Similarly, in a letter written to Gordon in 1936, cornet great Herbert L. Clarke cited wind-control as 98% of playing (in King, 2004). From an acoustical standpoint, Yoshikawa (1995) asserts that mouthpiece buzzing cannot accurately recreate performance because it is not capable of generating the same types of oscillations as occur when the sound wave interacts with the bore of the instrument.

Blended Methods

Of course, not all teachers fall neatly into one category or another. Vining (2008, p. 1) states, “Trombonists have a dizzying array of methods and texts from which to choose when seeking to develop their musical skills.” The field of brass pedagogy is

both broad and diverse. For this reason, many teachers appear to practice a blended approach, or one which exhibits distinct elements deriving from two or more schools of thought. Teachers tend to draw on what works well for them (Kennell, 2002). Given the preponderance of ideas in the field, the high likelihood of encountering multiple perspectives, and the fact that players often study with more than one teacher, it is not surprising to find pedagogies which embrace one school of thought while espousing some aspects of another.

A contemporary of Farkas and Jacobs in the Chicago Symphony, Edward Kleinhammer (1963) calls on a variety of teaching methods in his book, *The Art of Trombone Playing*. Like the sensory teachers, he advocates practicing the speed and mass of the blow by aiming at an external target in front of the body. He criticizes Farkas' general approach, asserting that proper embouchure function cannot be gleaned by appearance alone; however, this seems inconsistent with a photograph picturing him buzzing into a mouthpiece visualizer and looking into a handheld mirror. As a means of unifying the various aspects of his approach, he tells his readers to seek out opportunities to hear professional players and to work, above all, to imitate their tone quality and concept of sound. This use of an aural model is related to the conceptual approach.

Trumpet teacher James Stamp (1904-1985) is another example of a blended approach. Like the behaviorists, he viewed the acquisition of technique as leading musicianship, but also employed sensory concepts as a means to find a balance between lip tension and air support. In the same vein, he sought to sensitize his students to air flow, and stressed the importance of hearing (and playing) each note as a continuous and consistently even sound which does not fluctuate in anticipation of a note change. On the

physical side, he believed most players used too much tension in the high register and collapsed in the low register. To combat this, he suggests students think “up” when they descend, and “down” for ascending lines. He also advocated a slight pivot and upheld Farkas’ idea of changing the size of the oral cavity in order to manipulate pitch (Call, 2000).

Similarly, Fink (1977) agrees with the need for sensory training and explains the acquisition of a full tone in terms of finding the optimal balance between air speed and embouchure tension. He also cautions against too much buzzing on a mouthpiece visualizer, explaining that the pressures involved in playing are not the same. This implies a need to become comfortable with the resistance of the trombone, which would require attention to sensory input. Nonetheless, he retains much of the behaviorist perspective. He concurs with Farkas’ construct of the smile/pucker embouchure, but disagrees with his idea about horn angles. He also explains the use of an embouchure pivot and recommends it for beginning players as a means to facilitate the high register. At the same time, as he stresses the importance of hearing a good tone, but in the process lists a number of physical attributes which must be avoided: closed jaw, stiff throat, and tight tongue.

Whitener (1997) attempts to bridge some of the more conflicting ideas in brass pedagogy by subscribing to a conceptual mindset, while retaining much of the behaviorists’ language. Although he asserts that there is no single correct way to play and that different players can arrive at good technique in disparate ways, he advocates the use of a clear mouthpiece in order to observe the movement of the embouchure. He also advises players to use Farkas’ concept of a jaw thrust, and to make sure that the

embouchure is set correctly by keeping the corners away from a smile shape and the middle of the mouth out of a pucker. At the same time, he espouses Jacobs' concepts and warns the player not to fall into the trap of "paralysis by analysis" which can come from too much attention to physical details.

Summary: Brass Pedagogy

The only point of agreement within the field of brass pedagogy is that there is no agreement. A survey of the literature finds only broad subject areas under which various teachers tend to congregate; however, even within these generalized categories, there exists significant points of contention. To give shape and usable structure to the field, this paper has divided the prevalent voices into four groups. They are behaviorist, conceptualist, sensory, and blended.

Behaviorism is prominent not only in the area of brass pedagogy, but in psychology and education as well. Its basic tenet is an emphasis on details which can be observed, measured, quantified, and replicated. In brass teaching this thread emerged first with the trombonist Donald Reinhardt and his Pivot System, and was later disseminated by hornist Phillip Farkas, trumpet player Dilbert Dale, and saxophonist-turned-trumpet teacher Carmine Caruso. Characteristics common to this group include the notion that technique must precede musical training, meaning there is no point to teaching expressivity until the mechanics of the instrument have been mastered, and a focus on physical conditioning as the key to expert performance.

Conceptual teaching may be seen as the opposite of the behaviorist approach. Taking their cues largely from early 20th Century psychologist-musician Percy Buck,

these teachers view musical expression and artistry as fundamental to the learning process; therefore, technique on the instrument is taught as a symptom of the developing understanding of the musical language. From the first experiences with the instrument, artistic expression and the ability to react to an aural model are stressed. Although there were some early voices in this field, conceptual teaching has been largely championed by tubist Arnold Jacobs. Also following these ideas are trombonist Paul Severson and trumpet teacher Keith Johnson.

The sensory approach, or what might be called “playing by feel,” was largely criticized by Jacobs as he felt that taking information *in* interfered with the neural pathways which were attempting to send musical information *out*. Similarly, Jan Kagarice views too much sensory information as contributing to the neural overload that leads to dystonia. Nonetheless, both of these master teachers, as well as other practitioners of the conceptual approach, recognized the need to sometimes sensitize the student to the feelings associated with playing in order to promote greater physical efficiency. For this reason, the author speculates that “playing by feel” may be a matter of degrees: some is good and too much is not healthy.

Another important facet of the sensory approach is the idea of the “blown” embouchure, meaning that the configuration of facial muscles used for playing are a product of the air speed and volume created by the player. This follows the theory that moving air faster is the only way to effect pitch change. From this perspective, any “setting” of the embouchure which the player engages consciously only serves to short-circuit the process. Likewise, buzzing on the mouthpiece or so-called “free-buzzing” (buzzing the lips alone) is viewed as creating too much tension and is therefore not a

desirable way to practice. Followers of this approach are trumpeters Bill Adam and Don “Jake” Jacoby. Additionally, elements of Jan Kagarice’s approach are a match for this view.

Many teachers practice blended pedagogy, meaning elements from each of the other three schools of thought are adopted and implemented in ways which seem to have resulted in success for the teacher. A number of blends are observed in the field and there is no consistent manner in which the various pedagogies are combined. For example, trombonist Reginald Fink appears to exhibit characteristics of behaviorist, conceptual, and sensory methods, while trumpet teacher James Stamp espouses primarily a behaviorist/sensory mindset. From a critical stance, the blended methods and the level of disagreement within the field in general may serve to mislead or confuse students with an overbalance of conflicting information.

III – METHODOLOGY

Overview

The purpose of this study is to investigate and document the pedagogical techniques practiced by Jan Kagarice, a master teacher of trombone. Based upon an initial review of her practices using both print resources and information gathered through a preliminary study, a three-part conceptual framework was built using relevant literature in the areas of the physiology of performance on brass instruments, the context of the larger environment of applied teaching in music, and strategies relating to Montessori teaching. The intended outcome is to construct and codify a cohesive framework for effective teaching which can serve as an exemplar to the community of brass (and music) teaching at-large. An additional aim is to increase knowledge and awareness of the types of behaviors and practices which can lead to the onset of dystonic reactions, with the hope of helping more players to avoid this outcome.

Teaching, especially within the context of the music studio, has been likened to an art form. Johnson comments, “It defies reduction to a set of rules or formulae” (2002). If we flesh out the implications of this assertion, the actions and interactions which take place in the applied studio might be “analyzed through aesthetic parameters” (Bresler & Stake, 2002, p. 292). Because complex social phenomena are intertwined with context and environment, they are at once part and whole; therefore, meaningful analysis is gleaned not solely through isolating variables, nor through viewing the landscape in its totality, but by synchronizing details with overarching structure. The musician-as-researcher is uniquely positioned to engage in this type of examination as it is analogous

to active listening, in which separate musical moments are placed into the context of overall form, pacing, and meaning (Bresler & Stake, 2002).

Oldfather and West (1994) point to the art form of jazz as a similar metaphor. Fundamental to this idiom are tacit understandings about adaptability, cooperation, and expression which create a meaningful framework for conceptualizing the research process. First, jazz is improvisatory in nature, but is guided by set forms and chord progressions. There is an underlying process which is followed. This tension between structure and freedom is also inherent to qualitative research. Additionally, newcomers to the jazz idiom may not perceive the unique attributes of an expressive solo, or the interplay of soloist and rhythm section until a sufficient level of *educated listening* has occurred. In order for the beauty of the music to fully reveal itself, the listener must be present, become informed, and remain open. While reading a review of a performance or listening to a recording may yield some information, actually being a part of the experience as it unfolds is the only way to glean a comprehensive understanding of the art form. Jazz is also a communal, shared venture. Other musicians are encouraged to “sit in” for a tune, or a whole set, with the resulting changes being honored as consistent with the improvisatory nature of the style. From this perspective, the ideal position of the researcher is to situate herself amid the action, so as to become more involved and more deeply connected to the dynamics and flow of the environment. Gruber and David (1989, p. 248) describe the study of creative processes as requiring “immersion in a highly specialized subject matter.”

Through this lens, the primary role of the researcher is one of interpretation. Like encounters with a work of art, this is a complex goal because it requires attention to more

than one perspective. Each participant in the setting will have a unique experience, as will the researcher in her capacity as observer (Bresler & Stake, 2002). In order to tease meaningful insights out of these diverse points of view, the researcher must “take on the role of the other,” (Lofland, 1971, p. 2) as well as step back and experience the setting from an outsider’s stance. In this way, the presence of the researcher is not ignored or minimized, but is integrated as a meaningful part of the whole picture. This approach is well suited to the current study as the dynamic of the applied teaching environment is one which resists a reduction or controlling of variables, and because observations and other forms of data collection cannot be done without the researcher impacting some aspects of the goings-on (Bresler & Stake, 2002).

Research Approach

In order to address the complex nature of the social, interpersonal, and pedagogical environment in which Kagarice teaches, the design of this inquiry will be conducted as a *case study*. While the primary aim is to more fully understand the methods and communication style of a single teacher, a secondary goal is to use that information to build a more informed view of the causes and treatments of FTDS and how those issues may inform and impact the techniques used to teach healthy brass players. This balance between micro-issues relating specifically to a single practitioner’s methods, and macroscopic concerns for the field at large, has been described as an *instrumental case study* (Fraenkel & Wallen, 2006).

This form of generalization is not usually associated with the more open, context-specific nature of qualitative inquiry. If the purpose of the study is to clearly describe the

parameters, actions, players, and outcomes of a specific environment, how can it be used to make a broad statement or claim about an entire field? The aim of qualitative inquiry is to build a comprehensive picture of what contributes to certain outcomes in a particular setting. This “image,” or “vivid portrait,” can be used as a prototype for gauging other related situations in a way that is very similar to the relationship between art and real-life. We can “listen to storytellers and learn about how things were,” and find common ground with issues in our own practice. This may happen on many levels. For example, in watching the play *On the Waterfront*, we learn something about corruption in business and its impact on familial conflicts. These are universal themes which wind through a variety of situations. To the extent that a deeper understanding of “corruption” can facilitate a more informed decision about, for example, an issue in the workplace, the information gleaned from watching the play has been *generalized*. Qualitative inquiry functions in this way. Readers gauge how themes may relate to their own context or practices and implement the findings as is applicable for their needs (Eisner, 1991).

Researcher Role: Preliminary Study

Based upon my experiences during the preliminary study, the role of participant-as-observer appears most applicable to this setting. Kagarice’s personality is very gregarious and outgoing. She enjoys sharing her ideas and almost instinctively reaches out to whoever is nearby. Her students reflect this through a palpable sense of cooperation and camaraderie and it is not uncommon for them to observe each other’s lessons. Her studio stresses mutual inclusion and support, and as a newcomer, I was quickly afforded this status. It seems unlikely that any level of observation would be ignored by the subjects of the study. Because this environment is already very

collaborative and open, any negative *observer effects* resulting from my presence are likely to be largely mitigated (Fraenkel & Wallen, 2006).

Taking part in the environment also holds the potential to yield important data which would not otherwise be accessible. For example, during one of the preliminary observations, I was invited to participate in the therapy of a client with dystonia. At several points in the lesson, Kagarice asked me to put my hands on the player's neck so that I could feel the gradual decline in muscle tension she was facilitating. His spasms were not visible to the naked eye, so without this level of engagement, I would not have been able to understand what was happening.

From this perspective, my inherent bias as one of Kagarice's former students can be seen as an asset, as it will allow me to move into the role of participant-as-observer with relative ease. She is comfortable with my presence and welcomes me into her studio. I am already versed in her language and communication style and am therefore equipped to hear her as her students do. This situates me to ask pertinent questions, act on threads of meaning which emerge as "hunches," and choose relevant topics to pursue, all of which strengthen my efficacy as a researcher in this setting (Gholson, 1993).

From a critical stance, this same bias may prompt overly positive *observer expectations*, in that my own successes with Jan Kagarice may lead me to make certain assumptions about how her current students view her work. Although a researcher in any context must be aware of this issue, the closeness of this design makes it especially vulnerable; therefore, throughout the analysis of the data, I will endeavor to reflect on the role my own subjectivity may play in the discussion (Fraenkel & Wallen, 2006).

Participants and Setting

Defining the Master Teacher

Johnson (2002) asserts, “Fine teaching is easy to recognize, impossible to categorize.” Unfortunately, the characteristics which qualify a teacher to be labeled “expert” are certainly a topic of debate. Although the parameters are admittedly problematic, Berliner (1986) identifies several qualities which seem to point to expertise. They are: recognition in the field (such as through awards), high student success rates, and acknowledgment of mastery by colleagues.

Jan Kagarice, the primary subject of interest in the current study, meets these expectations. Her recent recognition by the International Trombone Association was supported and publicized by both close friends and colleagues from around the world. Further, her students have won national and international recognition in recent years. For the past three summers, trombone quartets under her coaching have won the International Trombone Association’s chamber music competition. Together with her husband and colleague Vern Kagarice, she successfully prepared Jeremy Wilson to win the principal trombone position with the Vienna State Opera/Philharmonic in 2007. Further, her work with dystonia rehabilitation places her on the cutting edge of her field.

Secondary Subjects

The secondary subjects of the study are the students who comprise Kagarice’s studio at the University of North Texas, and clients who travel from around the United States and the world to meet with her for assistance with FTSED. *A maximum variation*

sample of 3-5 students from within this population will be observed in order to “represent a diversity of perspectives or characteristics.” Potential student subjects will be assessed by age, ability level, and instrument (tenor or bass trombone), so that a cross-section of the overall demographic of her studio can be included. This is intended to mitigate any threats to internal validity which would arise out of sampling a homogenous student group (Fraenkel & Wallen, 2006).

Jan Kagarice’s clients seeking assistance with the symptoms of dystonia are of interest in this study; however, many of these individuals are in emotional distress and may not be equipped to cope with the presence of an observer. Access to her work with these players will be limited based on subject consent and/or availability during the duration of the project. Because there is no way to predict more than a few weeks in advance with whom Kagarice will be working in this capacity, logistical issues may preclude access to this aspect of her teaching. It is the intent of the researcher to make every possible effort to include dystonia clients in this study; however, it will not be possible to control the diversity or size of the sample.

Site Access/Data Collection

The ability to access this setting for the purposes of research is largely predicated on the long-standing mentorship/friendship between Kagarice and the researcher. As a former student, I have personal experience with the social dynamics and pedagogical practices of this studio; therefore, I am equipped to enter this environment in the role of a participant-researcher. This will grant me a unique perspective in terms of the potential

for understanding how the subjects in this study experience setting; however, this viewpoint may also compromise objectivity.

For this reason, the researcher will endeavor to obtain multiple data sources for the purpose of triangulating findings across numerous sources. In addition to field notes and interviews, data will be collected using applicable artifacts employed in the private lesson or classroom setting. These may include, but are not limited to, method books or other literature, items displayed prominently and/or used in the studio setting, any supplemental materials given to the students, such as syllabi or reading lists, records of student performance, and/or information found on the UNT web page.

Jan Kagarice conducts lessons both in her home studio, as well as at her office at the University of North Texas, with the former being primarily used for dystonia clients. As scheduling allows, effort will be made to observe teaching in both settings.

Field Observations

On-site observations will be made in Kagarice's home and school studios, as well as in classrooms at the University of North Texas. All observations will be archived to video. This will free the researcher from the need to take on-site field notes which would interfere with the participant-as-observer experience. Further, reviewing observations on video is especially relevant to the musician-as-researcher in that it will afford unlimited opportunities for understanding the timbre, pacing, tempo, and rhythm of each event (Bresler & Stake, 2002).

Following each observation, the researcher will record impressions through *field jottings*. This is a more informal and truncated writing mode than field notes and is intended to “provide the stimulus to help researchers recall a lot of details they do not have time to write down during an observation.” These notes will assist in forming a direction for later analysis of the video recordings as well as provide direction for interviewing the study participants. Further, the scheduling of field experiences will be organized and recorded via a *field log*, in which the daily goings-on of the project will be tracked (Fraenkel & Wallen, 2006).

Secondary Settings

Jan Kagarice’s “studio” is not only the environment which exists during a lesson, but extends to the social interactions practiced by the collective of students who work under her tutelage (Kennell, 2002). Kagarice’s students were observed to be especially collegial during the preliminary study. There were frequent visits from students who were stopping by to ask questions, report on performances, or clarify lesson times. These encounters were consistently received enthusiastically by Kagarice, who often asked about other students in the studio, or chatted about recent events. On several occasions, she invited one or more of the visitors to come in and observe or play. Based on these activities, her students appear to exhibit a meaningful group dynamic which will likely be of interest to the parameters of this study.

While the focus of this study is in the area of applied teaching, Kagarice also teaches a trombone choir, studio classes, and trombone pedagogy, and has identified all three of these contexts as important to her overall efficacy as a teacher and coach. As

scheduling allows, attempts will be made to gather data through observations of these settings.

Interviews

In addition to observations of one-on-one and group experiences, data will be collected through researcher-guided interviews focusing on open-ended questions. Student subjects will be asked to reflect briefly in written form on their experiences following each lesson observation. This summary, in combination with field jottings, will be used to identify emerging themes and to frame open-ended questions related to those ideas. To ensure that this form of inquiry is as comprehensive as possible, the six dimensions of social phenomenon developed by Lofland (1971) will be used as a guide.

They are:

1. **Acts:** Discrete actions which are passing; not sustained
2. **Activities:** Action of a longer duration and more frequent occurrence which constitute “significant elements of persons’ involvements.”
3. **Meanings:** Motivations which define and initiate activities
4. **Participation:** The position of the person in relation to the setting
5. **Relationships:** Interpersonal dynamics
6. **Setting**

In addition, these general topic areas will be investigated through the five types of interview questions listed by Fraenkel and Wallen (2006). They are:

1. **Knowledge** questions: Factual information which the respondent possesses
2. **Experience** questions: Descriptions of occurrences, activities, or behaviors not observed by the researcher but experienced by the subject.
3. **Opinion/Value** questions: Goals, beliefs, attitudes, or values
4. **Feeling** questions: Emotional response to activities or experiences
5. **Sensory:** What the respondent sees or hears (especially applicable to a musical context)

All interviews will be recorded to digital audio so that the researcher can be free from taking notes during the process. Nonetheless, brief notes will be jotted down to help the interviewer articulate new questions pertinent to the discussion, as well as to serve as a map for locating important moments in the interview recording (Fraenkel & Wallen, 2006). The following chart represents a synthesis of these question frameworks and will serve as a springboard for forming interview questions as they emerge out of the observation context.

Additionally, Jan Kagarice will be interviewed during each site visit. The format of each interview will be open-ended, but several relevant topic areas will be requested by the researcher. The first interview will focus on her general approach to applied brass pedagogy, especially in terms of how she perceives it differing from established or traditional methods. Her work with dystonia clients and the approach she uses in rehabilitation will also be covered at this stage. The second interview will ask Kagarice to address the psychological and emotional issues which relate to brass pedagogy, dystonia therapy, and/or musical expressiveness. In the final interview, we will cover any topics Kagarice feels have yet to be discussed, as well as her views on Montessori philosophies and their relevance to brass teaching.

Table 1: Proposed Interview Outline

	Researcher notes
Acts: passing experiences 1. Knowledge: What do you know about? 2. Experience: Tell me about? 3. Opinion: What is your opinion about? 4. Feeling: How does ___ make you feel? 5. Sensory: What did you hear?	
Activities: Sustained experiences 1. Knowledge: What do you know about? 2. Experience: Tell me about? 3. Opinion: What is your opinion about? 4. Feeling: How does ___ make you feel? 5. Sensory: What did you hear?	
Meanings: Motivations 1. Knowledge: What do you know about? 2. Experience: Tell me about? 3. Opinion: What is your opinion about? 4. Feeling: How does ___ make you feel? 5. Sensory: What did you hear?	
Participation: Relationship to setting 1. Knowledge: What do you know about? 2. Experience: Tell me about? 3. Opinion: What is your opinion about? 4. Feeling: How does ___ make you feel? 5. Sensory: What did you hear?	
Relationships: Interpersonal dynamics 1. Knowledge: What do you know about? 2. Experience: Tell me about? 3. Opinion: What is your opinion about? 4. Feeling: How does ___ make you feel? 5. Sensory: What did you hear?	
Setting 1. Knowledge: What do you know about? 2. Experience: Tell me about? 3. Opinion: What is your opinion about? 4. Feeling: How does ___ make you feel? 5. Sensory: What did you hear?	

Coding of Data

In extracting meaning from these notes, the researcher will attempt to record the various forms of “language” present, including the language of brass pedagogy, the language of the researcher and cognitive science, the language of educational theory, the

language of Montessori philosophy, the language of applied teaching, the language of students, and the language of the teacher (Gholson, 1993). Analysis of interview and observation data will focus on the interactions which occur as the teacher or interviewer and student “take turns” in communicating, either musically or verbally. This will constitute a unit of measure which will conclude when the topic has reached a point of saturation, meaning that analysis fails to yield new features (Gholson, 1993). Each unit of measure will be summarized according to its content and activities.

The naming of categories for coding data will emerge out of the data collection process. Through field jottings, the researcher will record “partial claims” or hunches about what types of larger frameworks are at play. These possible explanations will be used as an initial framework for coding data. Categories which do not find significant recurrence will be amended or deleted, and issues previously unaccounted for will be labeled and included. The coding process is also a check against researcher bias toward particular dimensions of Jan Kagarice’s pedagogical approach. As hypotheses develop, they must also emerge as robust within the data (Gholson, 1993).

Plan of Analysis

After data-coding, the researcher will search for emergent themes. Because the overarching purpose of the study is to create a “profile of practice” (research question #3) which can serve as a prototypical exemplar of expert teaching in the field, analysis will be primarily aimed at locating activities, behaviors, or interactions which are “functional” in the sense that they play an integral role in a larger schema or framework. This is determined primarily through frequency and intensity of incidence. If vivid examples are

observed across multiple data sources, the occurrence can be interpreted as a pattern of practice. By contrast, “passing” phenomena do not contribute directly to the end product, do not appear with consistency, and are discrete events which do not play a purposeful role in the profile of practice implemented by the teacher.

Gholson (1993) compares this to the analysis of music using a Schenkerian lens, which seeks to find coherence in the composition by teasing out the functional tonal features. “These tones are structurally significant because they stand in a fundamental relationship of ultimate tension and resolution” (p. 121). Through locating and naming these phenomena, the “goal-directed motion” of the composition can be found. Detours, ornamentations, truncations, and other modifications to this pattern can then be placed in their appropriate roles as relevant to the overall landscape. This honors and organizes both whole and part of the artistic (or teaching) experience.

This is an apt framework because social contexts, like a musical composition, are comprised of several layered dimensions of contextual and interpersonal structures. As articulated throughout this paper, the “infrasystem” of applied teaching functions within the background of studio interactions. In the mid-ground, behaviors and choices deriving out of the Montessori method guide Kagarice’s actions and speech. On the surface, the nuances of brass performance are addressed directly and can be assessed most readily. From this perspective, the primary issue of interest, namely brass pedagogy, does not exist within a vacuum of its own design, but is pushed and pulled by other forces at play in the setting. By exploring these layers, deeper levels of purpose and meaning can be extrapolated (Gholson, 1993).

Table 2: Plan of Analysis

RESEARCH QUESTION	PLAN OF ANALYSIS
What pedagogical dimensions can be observed in Jan Kagarice's activities, actions, and behaviors within the context of applied trombone lessons?	Observations taking place in both one-on-one and group contexts will be coded for consistency and intensity of certain pedagogical and interpersonal phenomena related to the performance of brass instruments.
How do these activities relate to the physiological aspects of brass playing?	Data deriving from interviews, observations, and artifacts will be coded for prevailing background events which relate to the field of applied and/or one-on-one teaching frameworks.
How do these activities relate to Montessori perspectives?	Data deriving from interviews, observations, and artifacts will be coded for behaviorally-driven mid-ground events which relate to the field of Montessori philosophy.
How do these activities relate to the prevailing context of applied teaching?	Secondary subject interviews will be conducted at three points during the research process. Students will have the opportunity to express their experiences using their own voice. Additionally, data obtained during the observation phase (examples: interpersonal communication, non verbal cues such as body language) will be coded for occurrences of this variable.
What practices emerge as large-scale themes from within the patterns of activities exhibited by Jan Kagarice in an applied brass context?	Data will be analyzed using the layered Schenkerian approach developed by Gholson (1993). This allows for the emergence of large-scale, structural themes which can be seen as guiding overall practice.
What large-scale themes can be organized into a profile of practice which characterizes the teaching philosophy implemented by Jan Kagarice in an applied brass context?	Structural themes will be synthesized into a system of recurring phenomena which together contribute to a "profile of practice" indicative of this teacher.

Data collection

Data collection was conducted over the span of three site visits beginning in September of 2009 and concluding in March of 2010 (Table 3). The researcher observed lessons and rehearsals and engaged in informal, ad-hoc discussions with Jan Kagarice and her students on a variety of topics as the opportunity arose throughout this period. During the second and third site visits, observations were recorded to video. Secondary participant (student) interviews (n=7) were conducted at the conclusion of the final visit. Extensive field notes were taken throughout the process, especially when impromptu circumstances (or other environmental factors) did not allow for recording equipment to be used.

The researcher also took advantage of additional opportunities to conduct interviews and observations during the *International Trombone Workshop* in Austin, Texas (July 7-10, 2010), where Jan Kagarice and a number of her students were in attendance. Several members of her studio competed in the final rounds of international solo competitions during this event: three finalists in the *Donald Yaxley Solo Bass Trombone Competition*, one of whom was also a finalist in the *Edward Kleinhammer Orchestral Bass Trombone Competition* (this student won), and a fourth student who had made the finals in the *Larry Wiehe Trombone Competition*. There were multiple opportunities to engage in informal discussions with Kagarice over the duration of this event. I was also able to attend the competition finals which featured Kagarice's students, observe coaching sessions, conduct interviews, and participate in Kagarice's

Table 3: Schedule of Data Collection

Dates/location	Observations*	Method(s) of data collection
9/24/2009 UNT	4 lessons	Field notes
11/17/2009 UNT	5 lessons	-Field notes -Video
03/09-03/12/2010 UNT	-10 lessons -Graduate trombone trio rehearsal -Freshman trombone choir rehearsal	-Field notes -Video -Audio recording
07/07-07/11/2010 International Trombone Workshop	-Coaching with trombone and piano	Field notes
Dates/location	Interviews and Discussions	Method(s) of data collection
9/24/2009 UNT	Informal discussions with primary subject (JK)	Field notes
11/17/2009 UNT	Informal discussions with primary subject (JK)	Field notes
03/09-03/12/2010 UNT	-7 interviews with secondary (student) subjects -Informal discussions with primary subject (JK)	-Audio recording -Field Notes
07/07-07/11/2010 International Trombone Workshop	-Informal discussions with primary subject (JK) -1 interview with secondary (student) subject	Audio recording
Dates/location	Performance(s) attended	Method(s) of data collection
9/24/2009 UNT	n/a	n/a
11/17/2009 UNT	n/a	n/a
03/09-03/12/2010 UNT	-Departmental Recital -Orchestra Concert (with trombone soloist) -Jazz Concert (U-Tubes) -Student degree recital	Field notes
07/07-07/11/2010 International Trombone Workshop	-Final rounds of two competitions featuring secondary (student) subjects	Field notes

**Lessons varied in length, but were typically greater than one hour.*

Totals:

Interviews/discussions recorded to audio format: 6 hours

Observations recorded to video: 22 hours

discussions with colleagues from around the world. All interactions during this event were recorded to an audio format. The secondary subject sample observed during this study was primarily determined by Kagarice's existing teaching schedule. Given that she works with students at all levels, from freshmen to doctoral, and both performance and education majors, it was possible to observe a diversity of players during the course of observations. Kagarice is the only bass trombonist on faculty, so she tends to work with more bass trombone players than her colleagues; however, the sample observed during this project was fairly equally divided between bass and tenor players. All secondary subjects were music majors studying either in the fields of education or performance.

Kagarice and her students were hospitable and very open to observations. Throughout the study, the researcher was granted easy access and quick acceptance by the subjects; however, the amount of activity and interaction simultaneously occurring between all of the participants presented some challenges. Scheduling interviews, especially with Jan Kagarice, was particularly difficult in that both she and her students were continuously involved in preparations for upcoming concerts, competitions, recitals, etc...and were rightly focused on their own time constraints. As the researcher became acclimated to the environment, it was clear that the best course of action was to move with the social dynamic of the studio (so as not to interfere with it) and to connect with participants for discussions as the opportunity arose. By the end of the final site visit, six hours of recorded interviews and twenty-two hours of lesson video were collected.

Despite hectic schedules, interactions with Kagarice were frequent, and there were ample opportunities for ad-hoc discussions of an informal nature, which generally addressed one or more of the specific issues that had emerged during a recent

observation. Although not in keeping with the original research methodology, the pacing and content of these conversations offered valuable opportunities to reflect on critical incidents as they occurred. As time allowed, more extensive discussions were also conducted, and these were primarily guided by Kagarice. Whenever possible, discussions were recorded to an audio format. When recording was not practical, field notes were completed as soon as possible following the conversation.

Transcription and Coding of Data

Video data were transcribed and coded using *Transana* software, which allows for time stamping of footage such that specific events can be isolated and coded, then organized into a collection grouped by keywords. Video clips (along with their transcriptions) were then ordered into like-groups and compared with one another. These data lists were cross-referenced with the field notes taken on-site in real time in order to further isolate critical incidents and compare similar events which occurred in different lessons. Of the twenty-two lessons which were observed over the course of the study, ten were fully transcribed and coded in this way. The remaining twelve were reviewed for critical events, partially transcribed as needed, and cross-referenced with the field notes that were taken on-site in real time.

All audio data (n=6 hours) from interviews and discussions with both primary and secondary (student) subjects were manually transcribed, coded for the presence of keyword categories, and organized into like-groupings using the “comment” and “copy/paste” features on *Microsoft Word*. Field notes and artifacts from the studio

environment (handouts, semester syllabus) were coded manually using the same procedure.

During the coding and analysis phases, the researcher remained in contact with the primary subject. As drafts of the final paper were generated, they were sent to Jan Kagarice for feedback. On several occasions, she redirected the focus of the research, primarily toward a more holistic and integrated scope, rather than a physiologically-based analysis of her teaching. Specifically, she supported the *five phase model* (see Chapter 4: Five phases of instruction) as an accurate representation of the pacing she practices, but requested that the *why/what/how* principle (see Chapter 4: Shared value system), which was originally expressed as *why/what*, be expanded. This change is reflected in the current draft of the paper.

IV – PRESENTATION OF FINDINGS

Purpose and Scope of Findings

The purpose of this study is to investigate and document the pedagogical techniques practiced by Jan Kagarice, a master teacher of trombone. Based upon an initial review of her practices using both print resources and information gathered through a preliminary study, a three-part conceptual framework was built using relevant literature in the areas of the physiology of performance on brass instruments, the context of the larger environment of applied teaching in music, and strategies relating to Montessori teaching. The intended outcome is to construct and codify a cohesive framework for effective teaching which can serve as an exemplar to the community of brass (and music) teaching at-large. An additional aim is to increase knowledge and awareness of the types of behaviors and practices which can lead to FTSED in brass players, with the hope of helping more musicians to avoid this outcome.

Based on experiences and insights gleaned during the data-collection phase, the scope of the project was reduced to include primarily those issues related to the pedagogical practices Kagarice implements with healthy players. Although her therapeutic strategies appear to be closely related to her standard pedagogy, the emotional issues impacting players who are working through the symptoms of dystonia appear to generate multiple teaching challenges, the scope of which could not be fully addressed within the timeframe of this project. Although the researcher had the opportunity to observe several of Kagarice's clients who were seeking rehabilitative support, it was not possible to obtain informed consent from any of these subjects.

It is the researcher's intent to revisit this topic on a more in-depth level at a later date, and to expand and augment the current findings with a more thorough investigation of Kagarice's rehabilitation strategies. Thus, the findings of the current study are intended to be of use to teachers working with players at all levels, in order to provide a framework for encouraging healthy function. It is hoped that the long term benefit to the community will be fewer players who require retraining and other extreme interventions later in life.

Overview

Kagarice's studio is a complex social setting that is rife with connections and meanings on a number of pedagogical and social levels. Her work as a teacher is thoughtful, strategic, and inspired. Because she views her methodology from an integrated, holistic stance, her thoughts and actions are calculated and interrelated. She presents her ideas as a complex and very detailed portrait, and like any great work of art, the scope and intent of the larger landscape is relatively clear, but the details come in and complement each other in a way that makes analysis and categorization challenging. In order to understand her aesthetic, it is necessary to become familiar with her perspective, dig for underlying layers of meaning, and tease out prevailing themes by investigating details more closely.

To that end, the scope of this chapter will address both the micro – daily activities which occur within lessons – and macro – the underlying philosophical structure which guides behaviors – issues which are at play in this context. In order to honor the overarching goals of Kagarice's approach, while revealing as much as possible about the

actions and behaviors she uses to realize those outcomes, this chapter is organized around four broad topic areas: the social dynamics and expectations of the studio environment relative to the larger context of the UNT College of Music, an overview of five instructional phases (*rapport, information, training, automation, and independence*) which were regularly observed within lessons during the course of this study, three sketches of sample lessons, and an overview of the theoretical belief system which shapes Jan Kagarice's approach (collectively referred to as a *shared value system*).

Environment: The UNT College of Music

The UNT College of Music is the second largest music school in the country, and has a long-standing and well-established reputation for excellence. There are many notable trombonists around the world who have graduated from this institution, including Tom "Bones" Malone of *Blues Brothers* fame, New York recording artists Conrad Herwig and Steve Turre (UNT Trombone Studio, 2010), Walter Hawkes, Music Director of the *Blues Clues* children's television show, Jeremy Wilson, Associate Principal Trombonist with the Vienna Philharmonic, as well as countless performers in symphony orchestras and service bands, freelancers, recording artists, university instructors, and public school music educators (University of North Texas College of Music, 2008).

The UNT College of Music boasts a total of over fifty ensembles, and there are approximately 1000 concert performances on the campus annually. (University of North Texas College of Music, 2008) Performance opportunities for students range from highly specialized groups in a diversity of fields, such as early, ethnic, and new music styles, as

well as the more traditional areas of wind ensemble, orchestra, and jazz (University of North Texas College of Music, 2008).

Although the department is diverse, UNT is likely best known for the long-standing notoriety of its Jazz Studies program, which was the first of its kind in the country. The premier ensemble in this area is the renowned *One O'Clock Lab Band*, which is known nationally and internationally, not only as a highly accomplished student group, but as a flagship for the American art form of jazz. The group has shared billing with the likes of Duke Ellington and Stan Getz at White House concerts (1967), headlined at the *Montreux Jazz Festival* (Switzerland), was engaged by the US Department of State as musical ambassadors to Germany, Mexico, Portugal, and the Soviet Union, and has been honored with several Grammy nominations.

Among the more unique and innovative ensemble options at UNT is a jazz trombone choir, the *U-Tubes*, which has won numerous awards, including the International Trombone Association's *Kai Winding Jazz Trombone Ensemble Award* (2008), the USAF's *Sammy Nestico Award*, the BMI Foundation's *Charlie Parker Composition Award*, and the 2010 Eastern Trombone Workshop's *National Jazz Trombone Ensemble Competition*.

In addition to the ensemble offerings in the jazz area, UNT trombone students have many outstanding classical performance opportunities from which to choose. The *Wind Symphony*, which is the flagship group from within the eight ensembles in the wind studies program, is directed by Grammy-nominated conductor Eugene Migliaro Corporon. Over the past fifteen years, this group has completed over one hundred

recordings for the GIA, Klavier, and Mark Recording labels and is well-known nationally as a premier ensemble in the wind band area (UNT Wind Studies, 2011). In addition, David Itkin, Music Director of the *Las Vegas Philharmonic* and Conductor Laureate of the *Arkansas Symphony*, recently became head of the orchestral studies program, which currently encompasses two large symphonic ensembles.

The trombone studio itself is known as one of the largest in the world, with as many as sixty-five students in attendance at any given time. In addition to the many large ensemble opportunities within the department, students are placed by audition into one of four trombone choirs, and have additional performance opportunities in brass chamber music. Music majors are also required to perform as soloists once per semester at weekly recital/master class hours on Wednesday afternoons.

Jan Kagarice's Studio

The environment of the UNT College of Music as a whole is significant in that its size and scope provides a background for Jan Kagarice's studio, which appears to be a close-knit social sub-group within the context of the larger culture of this school. Studio members describe themselves as being part of a mutually supportive community, which helps them to overcome anxiety about being on their own (often for the first time) and gives them a social anchor in moments of difficulty. Lisa explains how this has helped her:

I feel like if I ever have any problems, whether it be in a rehearsal, or if it's a personal issue – I feel like I could go to anyone on the studio, or I could go to Kagarice, and they've got my back and they're there willing to help me out. It's really comforting to know especially because this is the furthest I've ever been away from my family. In my undergrad, I was only a couple of hours from where my family was, and now I am like 1000 miles away! I can't

just hop in a car and drive home...So, it's kind of difficult. It's nice to know that it's kind of like my family away from home. It's really something in my life, to have the support. (Lisa)

Kagarice is the nucleus of this cooperative, and it would be short-sighted to attempt to get at the heart of what makes this group function without discussing her personality. She is outgoing, positive, energetic, and magnetic. Wherever she goes, people know her and are eager to interact. It is not uncommon for students and colleagues to seek her out for the specific purpose of benefitting her unique perspective. Kagarice has innovative ideas and her passion draws people in. For example, at the Trombone Workshop, an event where preeminent trombone players from around the world were in attendance, the researcher found herself seated at a restaurant table among several well-known university professors who were keenly interested in hearing Kagarice's ideas. For well over an hour, she talked and everyone just listened.

Jan has a quick smile and greets people with an outgoing enthusiasm that often culminates in an affectionate hug. She expresses empathy and interest in whatever her students want or need to discuss. As Aaron describes, "She just cares so much, I mean it's obvious. She is so fully engaged." Paul expresses a similar sentiment:

She's just an incredible person. She cares about us in a personal and professional way. She's gone through so much and has such a wealth of information, that it's extremely helpful and inspiring and very incredible. (Paul)

Kagarice's studio is generally a hub of social activity. It is a communal space in that students tend to come and go as needed, both between and during lessons. It is not uncommon for someone to knock on the door in order to ask for clarification about an upcoming lesson (the schedule varies by week, depending on the needs of her students

and their upcoming performances), request assistance with a school-related issue, or discuss a musical question or other topic which may have presented itself during practice or performance. Kagarice also encourages studio members to observe each other, so students often arrive early in order to watch part of the previous lesson. Visiting clients – typically players who are experiencing symptoms of FTSED – are also frequent visitors, so it is not uncommon for more than two people to be present during instruction.

The studio room itself is large and open, with all furniture (desk, filing cabinets, piano, and chairs) situated around the perimeter, allowing for the largest area to be utilized as a performance space. The room is also meticulously clean at all times and is free of excess paper, sheet music, or any of the other odds and ends that typically litter busy teaching studios. The sound panels which hang on the walls have been painted metallic purple and are covered with an almost solid display of posters and photos. There is an enlarged copy of the *ITA Journal* which features her photo as the *Humfeld* winner, as well as an oversized poster of Arnold Jacobs. A pink paper lists the characteristics of Csikszentmihalyi's concept of *flow*, and there are photos of her with the trombone quartet *PRISMA* and the brass choir *Monarch Brass*, as well as snapshots of students and colleagues. Various motivational adages about qualities like “courage” or “perseverance” are also mixed in. There is even a picture of the *Star Wars* character *Yoda* playing the trombone. The montage effectively communicates that this is a space for learning, music, hard work, and fun.

Course Requirements

Kagarice's private lesson syllabus (See Appendix D) outlines several unique aspects of her curriculum. First, all students are required to submit a current resume which accurately and comprehensively represents their experiences and is formatted according to industry standards. This can be a collaborative process, in that Kagarice will often review drafts and offer suggestions or feedback as the student works to refine the document. This process repeats every semester, so students always have a current resume which can be used to seek employment.

Secondly, students are required to complete a recording project. Kagarice lists the details of this assignment:

A solo recording with passages of contrasting styles and genres. The recording should contain at least 20 minutes of music. It can include unaccompanied or accompanied playing... This assignment will be graded as a pass/fail. (Course syllabus)

This is an independent project; Kagarice does not help students with choosing repertoire or in making arrangements to complete the recording. In some cases, this may promote collaboration. The researcher observed several students working together and offering each other feedback with the process. The projects are due by the midterm, after which the recordings are redistributed for peer evaluations.

Lastly, the syllabus indicates that a "goals meeting" will be completed during the first lesson of each semester. This is a collaborative session in which the student outlines his/her goals and together with Kagarice, sets both long and short term goals. Kagarice then keeps a detailed record of each student's progress. At every lesson, she references

and adds to an open notebook on her desk where she records lesson times (which can vary widely from around an hour to two or more hours), number of lessons each week (which can also vary based on the student's schedule, upcoming competitions/performances, etc.), what each student is working on, and what their progress was during that session.

Five Phases of Instruction

What types of instructional activities occur in Jan Kagarice's lessons? Based on the individual needs of each student, the content, pacing, repertoire, focus, and structure differ from one lesson to the next; therefore, the overall pacing and structure of her approach is not dependent upon any of these details. Rather, the goals which form the purpose for undertaking specific activities are the structural elements from which a pedagogical framework emerges.

Specifically, Kagarice practices different teaching *phases*, each of which targets a specific learning goal from within the emotional, cognitive, physiological, or social domains. In this way, she engages in *goal-oriented* behaviors, meaning she identifies and focuses on a desired outcome and then moves dynamically through instructional strategies as a means to guide the learner towards that objective. As the student progresses, Kagarice's actions adapt to the changing needs of the learner, rather than following a uniform or predetermined list of instructional goals.

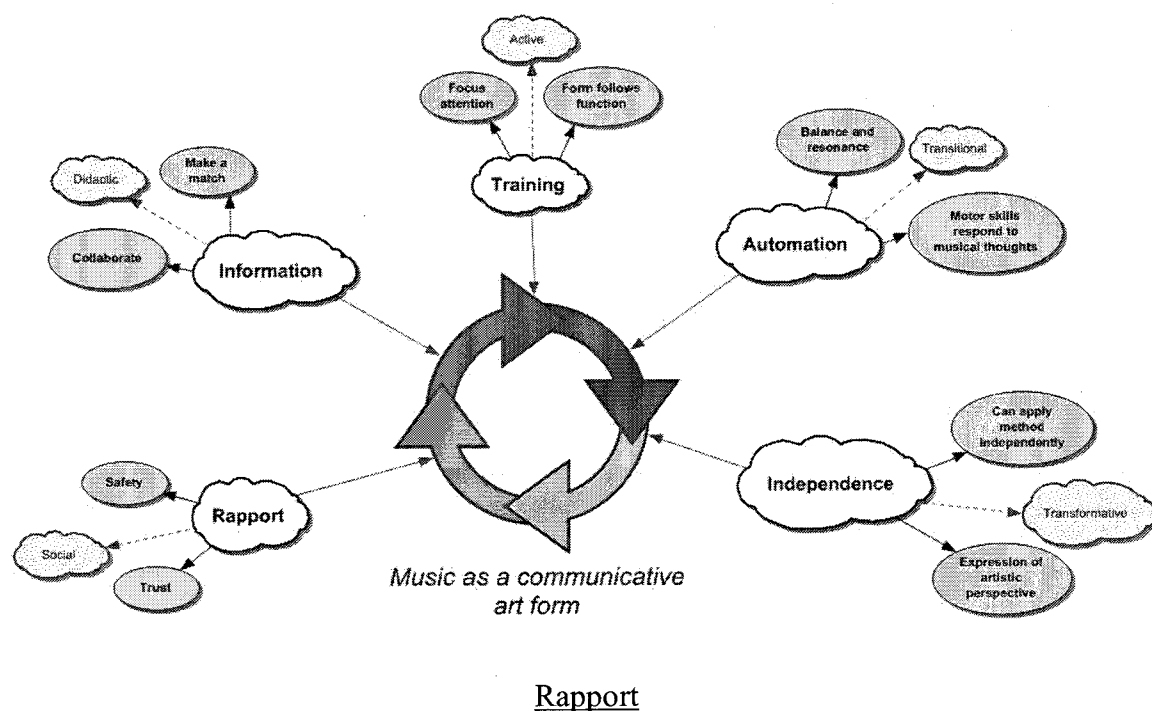
The intent of the *goal-oriented* behaviors Kagarice employs and the pacing with which she implements them provides a structural basis for analyzing the parameters of her pedagogical approach, particularly in terms of understanding the developmental

process her students undergo and how that informs her actions with learners at different levels. In order to provide an organized framework for analysis, the researcher generated five descriptors to categorize the types of goal-oriented actions, or *phases*, which appear to be consistently implemented by Kagarice within the context of applied instruction. They are: *rapport*, *information*, *training*, *automation*, and *independence* (Figure 2). At the locus of these behaviors is the conceptual motivation of *music as a communicative art form* (See “Shared value system: Structural principal #1”), meaning all teaching strategies are undertaken for the purpose of honoring this overarching goal.

The five phases are cyclical and interdependent and are revisited repeatedly over time with all students. Younger players tend to spend more time in the first three phases, while advanced learners are more frequently functioning within the last three phases; however, all lessons include multiple phases, and frequently, aspects of all five. In some cases, especially for highly skilled students, one or more phases can overlap or occur simultaneously.

This section will present an overview of each of the five phases in turn, and offer relevant examples of the types of behaviors which were observed within each of them. As a means to provide exemplars for analysis, the section which follows will present three lessons which have been analyzed using the five phase model. Because Kagarice is motivated by a highly detailed musical value system and consistently imparts these ideas to her students, the goals of each of the five phases will be fleshed out in detail through an overview of Kagarice’s teaching philosophy.

Figure 2: Five Phases of Instruction



Kagarice's first objective in all lessons is to engage in a friendly, welcoming conversational mode which fosters open, shared communication. This *rapport* phase targets *social* issues, specifically in terms of establishing positive and productive student-teacher interaction and creating an open environment for learning. A mentorship which provides support for both personal and professional issues is also established during this phase.

Older students typically have a well-established relationship with Kagarice, so may pass through this phase very briefly, such as through a quick greeting or a friendly "catching-up" session. By contrast, younger students appear to have higher needs in this area, specifically in terms of emotional support, assistance with personal issues, learning the expectations of the studio environment, or career counseling; therefore, the rapport phase is typically more prominent in their lessons.

This phase also serves a secondary, diagnostic purpose. During conversations, Kagarice observes the student's behaviors reactions in order to gauge what kind of learner they are, what types of interactions make them feel comfortable, and what style of communication she needs to adopt in order to effectively guide them. As Marc (a doctoral student, performance major) comments, "the way she teaches is completely dependent on the way that her student learns." While she is engaging the learner, forging a positive mentorship, bringing them into the environment, and making social connections, she is also getting a feel for who they are and what they need; she is becoming acquainted with their way of seeing, feeling, hearing, and speaking.

Students corroborate this idea in that they feel Kagarice uniquely perceptive in her ability to tune into their mental and emotional state at a given time and correctly diagnose what they are thinking or feeling. This enables her to act as a guide through the learning process in a particularly effective way, as Aaron explains:

It's just unbelievable...she has this unique ability to just get into your head...[and] know exactly what's going on...Like in my lesson we were talking about how sometimes the difference [a change in playing] is not always tangible; you can't always hear it. But, the teacher has to be careful to say when it's better even when it doesn't sound better. She knows what you're doing! She knows what you're thinking, and then she will say, "That one you were thinking about it - you were thinking about doing." (Aaron)

Kagarice accounts for her ability to "get into" the learner's head through her practice of holistically engaging the student in the learning process. She views musical performance as a combination of mental, emotional, and physical capacities; therefore, she works with the student as a *whole person* from the start by offering mentorship and support in all aspects of their lives, careers, and general well-being. This enables her to

become familiar with each individual's unique goals, needs, and challenges, as she explains:

What the teacher does is the dependent upon that person's ability to get it, their ability to physically learn...intellectual, emotional, and mental development...everyone is at a different pace. (Kagarice)

Information

The second phase is *didactic* in focus and is built on the quality of student-teacher *rapport*. As with any discipline, there is a significant body of information which must be conveyed to the student in order to facilitate meaningful progress. In any context, an overabundance of *information* can feel overwhelming to the learner; however, through positive social connections, Kagarice builds trust and fosters open communication so that the delivery of content can be targeted and purposeful, while continuing to feel informal and non-threatening to the learner. When operating within the *information* phase, Kagarice states that she wants the process to “feel like a conversation,” rather than a lecture.

Over time, the goal of the *information phase* is to convey the totality of Kagarice's musical and pedagogical value system so that the learning process is consistently supported by clear and detailed understandings regarding *why* specific actions are being undertaken; however, only what is needed in order to proceed incrementally at a given time is discussed, meaning Kagarice offers explanations as they are needed, rather than according to a predetermined schedule. In the earlier stages of instruction, informational conversations are necessarily more frequent, detailed, and teacher-centered. As the student matures and progresses, topics are revisited, but evolve

into more complex, dynamic, and collaborative discussions. Once the student reaches a level of independence within a particular topic area, the purpose, scope, and content of discussions evolves, becoming more detailed, rich, and cooperative. Kagarice explains:

I know then, that he doesn't really need me anymore. I am there with him, I am always going to be there for him, but it's his own now. He's got it. It's his information now. I'm here, we can discuss it, but our discussions will be on a different level. He's going to have more insights now.

Specifically, Kagarice wants students to “own” the information, meaning they can apply concepts autonomously within the context of their own practice and performance. To that end, she watches for several key indicators which reveal where the student is in the knowledge acquisition process. First, as information is introduced, she looks for points of agreement, meaning the student *makes a match* with something they already know or do well. Kagarice believes this is an integral step in that it creates an atmosphere of *safety* around the learning experience. New ideas are presented in terms of their connections to existing thoughts and experiences, which allows the learner to gradually build more complex understandings without feeling lost, confused, or overwhelmed. Second, as discussions continue, they deepen in scope and complexity so that the student absorbs increasingly detailed concepts. Lastly, Kagarice looks for the student to apply ideas independently – meaning they self problem solve or explain an idea to others – which she regards as an indicator that the concept has been fully absorbed.

Over time, learner autonomy becomes more frequent and comprehensive in scope. The overarching goal is for the student to make a developmental advancement, meaning they have been exposed to a new idea and through practice (see “Training”) and

collaborative discussion, have learned to fully integrate it into their own practice. The instructional benefit of learner autonomy is that once concepts are fully absorbed and can be applied independently, Kagarice can draw the learner's attention to a target issue through a quick *catch phrase* – a word or short phrase which functions as a stand in or reminder of a previous, much more detailed, conversation. This enables a quick transfer information, which is particularly helpful while the student is in an active practice mode. The artistic benefit of learner autonomy is that the player becomes equipped to formulate and impart original musical thoughts.

The acquisition of information is not an end-goal; rather, it is a means for providing an important context or motivation for taking action. To that end, the *information phase* repeats many times over the course of study so that the student absorbs an increasingly expanding and complex version of the technical, physiological, and musical information required for effective practice and performance. The overall aim is to *integrate* information with *doing*; thus, phase two (*information*) and three (*training*) frequently overlap for the purpose of reaching a target goal.

Training

The *training* phase is *active* and targets Kagarice's assertion that "the body learns by doing." Information is only useful when it is applied to the action of playing; therefore, knowledge acquisition is followed by *implementation*. Ideas are explained, and then they are used. At this level, learners have an understanding about how to act, but have not yet applied concepts to their own practice; thus, the teacher *actively guides*.

Of the five phases, *training* is the most adaptive and dynamic. By closely observing the student's actions, reactions, and progress, Kagarice charts a path for improvement by taking actions which redirect the student's *focus of attention* (See "Supporting Principle #3") to the target goal; therefore, the specific strategies employed in this phase are wide and varied, so it is challenging to fully codify and define her approach at this level.

Nonetheless, activities appear to target two general learning domains relative to brass pedagogy: *conceptual* – an internal auralization of the desired musical sound and the ability to realize it through performance – and *sensory* – developing a feel for balance and resonance within the instrument so that tone production is resonant and efficient. Reflecting the student's ongoing progress, Kagarice's verbal instructions and feedback evolve over the course of the training phase. Initially, her interventions are targeted and detailed, and eventually become more broad and conceptual as the student progresses.

The goal of *training* is for motor skills to become *automated*, meaning conscious control over movements is released and music is realized conceptually, solely through an accurate auralization of sound. (Bloom, 1986) To that end, the process alternates between *sensory awareness* and *musical coaching*, so that the action of *blowing* air and finding resonance merges with musical thinking such that *air becomes sound*, or as Kagarice says, "air goes down the tube and becomes the exact sound you want to make." Within this process, the teaching of technique is consistently linked to the larger context of expression and creativity. As Kagarice states, "No technique was ever arrived at without a musical reason for doing so."

The student's primary activity during a training phase is to work toward target goals through the learning model of *repetition, trial and error* – the student engages in a state of mindfulness which allows them to focus on a physiological or musical idea while repeating an action in the body. *Trial and error* describes the process as exploratory rather than prescriptive, so each student learns at a unique pace. As Marc explains, there are “wide avenues you can travel down and stay focused while still being able to explore.” Regardless of the repertoire, the purpose is to train motor skills which will generalize to all aspects of performance; therefore, the *amount* of material covered is secondary to the expressive and technical quality of the performance and/or the experience of the learner.

This process is progressive in a general sense, in that complex skill-sets are broken into smaller, learnable chunks which are then incrementally expanded in order to build a composite skill set. In a handout titled “Practice Techniques,” Kagarice explains why repetition is important:

Successful results can only be achieved through repetition. Do the math:
 4 misses, followed by 1 success = a 20% chance for success
 4 misses, followed by 4 successes = a 50% chance for success
 4 misses, followed by 12 successes = a 75% chance for success
 4 misses, followed by 36 successes = a 90% chance for success
 4 misses, followed by 72 successes = a 95% chance for success

Based on this formula, and the assertion that the “body learns by doing,” Kagarice tends to isolate a single, targeted phrase or section of a larger work which is then repeated many times, sometime for as long as an entire lesson; however, it is important to note that repetitions are highly targeted and require the learner to engage mentally, emotionally, and physically in a way that appears to avoid tedium or frustration.

As the student repeatedly performs, Kagarice offers ongoing feedback aimed at redirecting the student's focus of attention to the intended goal. Student report that this type of activity is particularly affirming and helpful, as Paul explains:

She wants, and demands so much music from you, and there's so many minute things that you've got to be focused on, and with [her] playing the piano, those things really come out to you, you can hear it – hearing it over and over. It's great...Repeating it until it's part of you, that really helps...There's a point where you can feel the resonance with the air, and that feel of balance, and...that's the goal, that's the end result...You actually have to experience it. (Paul)

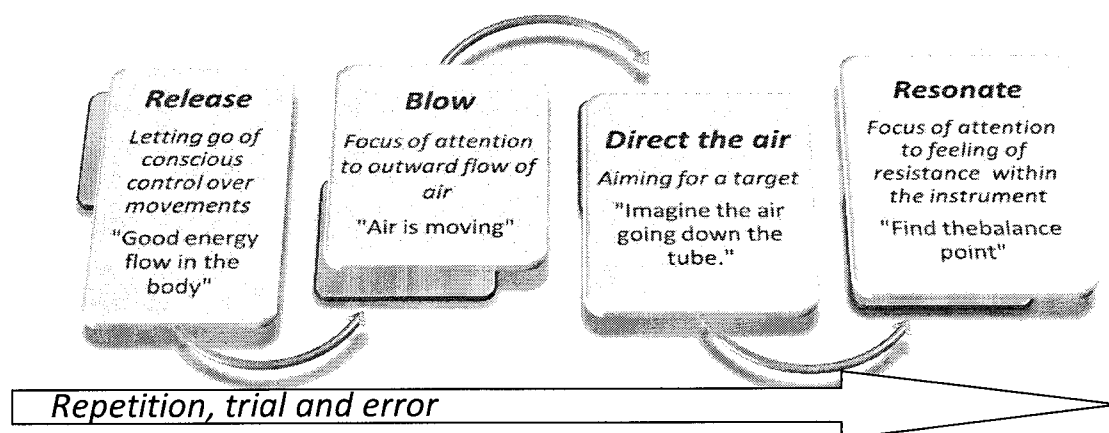
Sensory Training

Sensory training, which focuses on the motor skills relevant to brass playing, is generally the first step in the *training* phase because it addresses basic tone production issues which must be in place in order for the player to perform consistently. Sensory training is a goal-oriented process which involves four primary steps, all of which are first introduced, repeated and practiced, and then reviewed as needed. They are: *guiding the body into a state of release*, *brining the focus of attention to the outward flow of air*, *directing the air into the instrument*, and *finding balance/resonance* (Figure 3).

Sensory training is a dynamic and cumulative process which is not strictly ordered. Players do not fully master each step before moving to the next; rather, the student's skills are gradually refined as the four steps are repeated over time. For this reason, aspects of sensory training are observed in lessons at all levels; however, the amount of time dedicated to this phase varies depending upon the level of the student. Younger players typically need more repetition and may spend the majority of the lesson

in a sensory training mode, whereas more experienced students may require only quick reminders while they are focused on more advanced tasks.

Figure 3: Goal-oriented Process for Developing Sensory Awareness



The first goal – *release* – is defined as a physical state in which the body is movable and relaxed, rather than rigid or controlled. Actions are fluid and comfortable and no part of the musculature is static or actively held in place. Kagarice also describes this as “good energy flow through the body,” or more specifically, in reference to embouchure, a state in which the “lips are in a position to respond to the airflow,” meaning the facial muscles are released and relaxed. Depending on the past training experiences of the student, *releasing* may require letting go of many layers of tension and years of habit, so it is usually a multi-phase process which is incremental and spread out across many lessons.

Releasing is always practiced as a reaction to *moving air*. The player begins by repeating the action of *blowing* – focusing on the feel of the outward flow of air (rather than the amount of air inhaled). Initially, this is done away from the instrument and

without a mouthpiece. The student simply stands in place and practices focusing on the outward flow of air, as Kagarice offers ongoing verbal feedback aimed at reinforcing that action. Sometimes, the student is directed to lie on the floor in a supine position so that the need to hold a particular postural configuration is eliminated, which also helps to counteract any excess tension that has built up around holding the instrument in place.

Kagarice listens to the quality of the airflow and watches the student's movements in order to determine where excess tension or habitual muscle contractions may be interfering with the process. Specifically, she listens for an air column which is immediate, consistent, full, expansive, and resonant, meaning there are no bumps or guttural sounds interfering with the free flow of air. Because most players have been taught to *breathe*, the action of moving air can elicit a set of intellectual instructions, such as how to move the abdomen, chest, or mouth in order to maximize inhalation; therefore, many students cannot easily accomplish the goal of *focusing on the outward flow of air* because they are quickly distracted by prescriptive physical directives aimed at doing it "right."

Kagarice observes the player's movements in order to determine whether or not intellectual habits are interfering in this way. Specifically, she looks for muscle contractions which are ordered and consistent, but unnecessary to the task of *blowing*. These are the signs of learned muscle memory habits which need to be released. In order to facilitate this, she provides ongoing verbal feedback aimed at redirecting the student's focus of attention from prescriptive thoughts about "how to do" to goal-oriented directives which target the product of the intended action (such as *blowing*). Examples of the types feedback observed in lessons are summarized in Table 4.

At the same time, Kagarice counteracts extraneous movements through physical manipulation. As the player repeats the action of *blowing*, she may move the player's neck, arms, head, or shoulders in opposition to any unnecessary muscle contractions which initiate in conjunction with moving air. For example, as the player inhales, Kagarice might "confuse" the facial muscles by moving them randomly so that they "forget" to form into a rigid embouchure configuration upon exhalation. Similarly, if the player employs excess tension while breathing in (such as raising the shoulders), Kagarice will physically manipulate the head and neck either in order to counteract or reinforce certain movements. This process disrupts habitual muscle firing and is intended to throw the body off balance so that new motor pathways can be formed. Kagarice describes the process as "learning to act without *doing*," meaning the player is focused on *blowing* air, rather than the specific muscle movements required to achieve that goal.

This is also an exercise in mindfulness and active awareness in that the key to the process is the student's ability to focus on the task at hand – *blowing* – rather than physiological directions about how to accomplish that goal. As this capacity develops and habitual physical symptoms begin to release, the player is coached to begin focusing on *directing air outward* to a target location, such as into the mouthpiece or down a straw held an inch or so in front of the embouchure. In addition to adding feelings of *resistance* for the player, these targets allow the air to make sound, which provides the teacher with an additional diagnostic tool for gauging the quality of the flow. The goal is for the player to learn *where the air is going*.

At this point, players usually begin to let go of habitual (but unnecessary) muscle movements, and this can become visible through involuntary spasms in the embouchure,

neck, or face. Kagarice states, “There might be some fluctuating and shakiness as the body searches for balance.” These random “ticks” are erratic remnants of old muscle memory and are a positive sign that change is beginning to occur. As Kagarice says, “muscles that fire together, wire together,” meaning that regardless of why a particular movement was initially attached to the action of playing, once it is there, it is ingrained. The player cannot simply give the direction to “stop”; rather, control of the movement has to be released in the brain, and then the action of blowing must be repeated enough times to learn it in a new way.

Table 4: Sensory Strategies Observed in Lessons (in Progressive Order)

Strategy (quotes)	Goal	Action
“Good energy flow in the body.” “The whole body is released.”	<i>RELEASE: Awareness of the feel in the body</i> <i>Finding a state of relaxed release (muscles are flexible and moveable)</i> <i>Focus of attention to outward flow of air</i>	Standing position or supine on the floor, moving air (blowing) Physical manipulation of the head, neck, or facial muscles to release tension
“Learning action while your body is in a state of release.” “Relax – release” “Air, no sound” “Where is the next outward flow going?”	<i>RELEASE/BLOW: Practice blowing while maintaining a state of relaxation (without doing) throughout the body</i> <i>Releasing the air – not holding back or metering the flow of air</i>	Standing or supine, with or without instrument/mouthpiece/straw, moving air; Physical manipulation of the head, neck, or facial muscles to release tension
“Imagine the air going down the tube.” “Air can’t leave on time, it has to get there on time.”	<i>DIRECTING AIR: Directing the outward flow of air while maintaining a state of relaxed release</i>	A target for the air is added – usually a straw (1-2 inches in front of the embouchure) or the mouthpiece
“Air goes down the hole and finds resonance.” “Keeping noticing how the air is making the sound.”	<i>RESONATE: Awareness of the resistance in the instrument while maintaining relaxed release</i>	Connecting the blow to the instrument by staying in a state of release and moving air down the tube to find resonance
“Find the balance point” “Surf the air” “Think one note that changes pitches.” “Stay out there at that balance point.”	<i>RESONATE: Become aware of balancing the energy supplied by the player with the resistance of the instrument</i>	Blowing through long tones, short phrases, or a single note at a time on the instrument while being aware of sensory feedback
“You’re just observing air move, and it becomes exactly the statement you want to make.”	<i>Sensory and conceptual thinking are merged; motor skills are automated</i>	Repetition, trial and error

Specifically, Kagarice looks for whether or not the player's movements are organized and consistent. If contractions are seen to engage consistently in advance of the movement of air outward, prescriptive muscle memory is still in place; therefore, the player may be continuing to place intellectual focus on consciously directing that action, so verbal cues which redirect awareness toward the intended goal – blowing – can still be helpful at this point. Conversely, if the movement is random and irregular, it is firing randomly, it is beginning to fade from focus and will continue to diminish over time.

Once the air is directed forward in a state of release, the player is equipped to approach the instrument and find *resonance*. Because the embouchure, oral cavity, neck, and chest are free of excess tension, air can move without interference, or as Kagarice says – borrowing from William Cramer (1985) – the player can “blow freely.” In this state, the body is free from internal resistance, and the player can therefore begin to sense and manipulate the resistance generated by the instrument, which allows for an efficient energy exchange. Specifically, Kagarice explains the ideal tone production system in terms of finding the *balance point* – the point within the instrument where the moving air supplied by the player bumps into the still air in the instrument and creates a change in air pressure that initiates a vibration in the embouchure (See “Supporting principle #5: Balance and resonance”). Kagarice asserts that activating the balance point will trigger *resonance*, which is the most consistently, efficient, and sonorous tone.

Although this is a stepwise process, Kagarice resists the notion that it can be reduced to a pre-set list of physical directives. She cautions that if her methodology is employed as a catalog of instructions, it will be ineffectual. Instead, as the student works toward certain goals, such as moving air outward, the teacher redirects and guides the

player towards resonance and efficiency through consistent and insightful feedback, always remaining mindful of how the student is responding to the process; therefore, the teacher must be equipped to *hear* and comment on fine distinctions in the quality of the air flow and the resonance it produces. For most players, the biggest challenges appear to be intellectual, in that they must learn to *focus attention* on the outward flow of air, rather than the “setting” of an embouchure. Throughout the process, old habits reassert themselves, and progress can be erratic. As Greg describes, “it takes time, it takes repetition, and it doesn’t happen overnight...It takes so much repetition to get it to stick and replace old habits with new ones.”

Conceptual/Musical Training

Kagarice defines *concept* as “the audiation of the musical ideas that we intend to communicate.” (Appendix H) Once the student learns balance and resonance with the instrument, or is moving toward efficiency in that area, aural acuity is developed and refined as a means to provide direction to the mechanisms of tone production. Sensory awareness is continuously reinforced by ear training and musical coaching so that the player *hears* pitch accurately, and *feels* the resistance associated with that sound. Over time, the action of blowing becomes equated with tone production, or as Kagarice states, “air becomes sound.”

The totality of Kagarice’s approach to conceptual training is difficult to fully codify because it is dynamic and adaptable. She works in cooperation with the student’s needs and chooses strategies which redirect their focus of attention to aural sensitivity and awareness in an ongoing fashion. Table 5 lists examples of some of the conceptual

strategies which were observed in lessons; however, for the purpose of clarity, these will be summarized in terms of five broad categories: *directing focus of attention*, *ear training*, *improvisation*, *modeling*, and *analysis*.

Like sensory training, conceptual training requires mindfulness and an ability to be attentive to subtle aural details; therefore, Kagarice often begins this process with an anecdote (in an instructional phase) she calls *practice room A* and *practice room B*. In this hypothetical situation, there are two students, one in “practice room A,” and one in “practice room B,” working on a target phrase of music. In practice room A, the player is working to refine his/her *movements* for the purpose of improving a target phrase. For example, a trombonist would clean a scale passage by focusing on the angle of the slide arm or the stopping points on the slide for each note

By contrast, the player in “practice room B,” is focused on the *sound* of the phrase. Rather than attempting to manipulate movements, this student is only trying to manipulate *the product*. She/he is paying close attention to the aural aspects of the music and is working to make each detail more clear through repetition, trial and error. After the same amount of practice, Kagarice asserts that the student in “practice room B” will have accomplished more in terms of tempo, dexterity, efficiency, and accuracy. In addition, because this player focused on sound, she/he will also be *communicating* through their playing. Once this story has been shared, Jan frequently reiterates the goal of focusing on musical sound through the *catch phrase*, “remember practice room A/practice room B.”.

Kagarice employs this story as a teaching tool because it demonstrates her assertion that there is substantial musical information which can only be absorbed through hearing. Techniques are first understood aurally, and then attached to notation.

Table 5: Conceptual Strategies Observed in Lessons

Activity/Quote	Description/Goal
Focus of attention “Don’t let anyone tell you where those positions are except your ear.”	<i>Teacher actively engages by offering ongoing verbal feedback aimed at bringing the focus of attention to the internal musical concept</i>
Imitation “I say, you say”	<i>Teacher plays at the piano – student imitates; teacher alters various musical attributes over the course of many repetitions in order to call attention to specific concepts or performance issues</i>
“Skelatizing”	<i>Teacher demonstrates at the piano; A melodic line is broken down into its core harmonic elements; ornamentation is removed in order to uncover the basic movement of the line</i>
Resonating with the piano	<i>Teacher depresses sustain pedal and plays a short phrase while allowing the piano to ring – creates an aural model for resonance; Student imitates</i>
Conducting/gestures/singing	<i>Teacher guides performance by singing along and/or using conducting gestures</i>
Analysis/understanding “What makes this Classical style?” “So, what’s happening here?”	<i>In a collaborative dialogue, student and teacher discuss theoretical or musicological issues which guide the performance of the piece</i>
Playing by ear	<i>Students are assigned tunes to figure out/perform by ear (usually in multiple keys and/or styles, as dictated by the teacher);</i>
Ear training “Listen to the color change.”	<i>Using discussion, analysis, or demonstration, the teacher emphasizes important harmonic/melodic elements in order to strengthen the student’s aural pitch sense</i>
Attention to expression “What is the affect here?”	<i>Teacher encourages student to take on a characterization of the mood/emotional impact of the music</i>
Turn the stand around	<i>Teacher temporarily covers the music so that the player is forced to engage the ear (rather than the eye)</i>
Attention to active listening “For every hour in the practice room, spend another actively listening to music.”	<i>Work to spark student’s curiosity about music in order to encourage an active relationship with music listening outside of the lesson environment</i>
Focus cards	<i>Teacher has prepared flash cards with various musical elements list on them (tone, tuning, dynamics, articulation, etc...); one card is put on the stand at a time and student focuses on making that element as refined as possible for a series of repetitions</i>
Rushing the ear	<i>Teacher sings along with the student, but “rushes” ahead slightly in order to encourage the ear to “hear” faster; this facilitates increases in tempo</i>
Altering the tempo “Even slower...and hear every note in the process.”	<i>Slowing down the tempo until the student has time to hear every note as they play, then gradually moving the tempo up over repetitions.</i>
Improvisation	<i>A harmonic progression is taken out of context from a piece and the student improvises in that style; student are asked to change some aspect of the performance through aural cues/demonstration</i>

The performer's mindset "I'm sorry, say that again."	<i>Engaging a communicative mindset; encouraging student to think of imparting ideas</i>
Attention to listening "That's a huge sound, it's really beautiful. Enjoy it and sing that phrase." "Practice room A/Practice room B"	<i>Feedback targets aural aspects of performance (rather than descriptions of how to perform)</i>

Likewise, elements of style and nuances of expression must be applied intuitively, rather than being superimposed over the phrase consciously. During a lesson with Greg, Kagarice explained this in terms of the difference between applying style features prescriptively vs. hearing them as an intrinsic part of the phrase in Mozart's *Tuba Mirum* solo:

How would one sing this? And how would they group it? ...if you don't group in a classical style, it sounds wrong. You can always tell if someone understands the style in the Mozart *Tuba Mirum*...if you get a lot of [accent on the first of the syncopated notes]...you can tell when someone doesn't get it...that's not classical style. It sounds like you are articulating a certain way instead of saying it a certain way. (Kagarice)

At this level, the bulk of lesson time is spent fully immersed in the sonic world of the target repertoire. This is largely a non-verbal instructional mode in which *musical* communication is employed. Generally, Kagarice will remain seated at the piano, repeating a targeted musical phrase while the student responds in imitation (on the trombone). Throughout this process, she performs alterations which are intended to call attention to a particular feature, such as the harmonic progression, an interesting ornament, a change in dynamics or pacing, or some other detail. Sometimes, portions of the music are learned by ear, as Kagarice turns the stand around (blocking the student's view of the music) and proceeds forward with the student imitating her expressions of each phrase. To enhance the sound of the piano, Kagarice will often depress and hold the

sustain pedal through phrases in order to fill the room with a resonance indicative of the ideal blend of two or more brass instruments.

Throughout this process, technical elements are treated as intrinsic aspects of specific musical contexts, rather than disassembled and learned individually. For this reason, Kagarice often eschews technique practice in which the goal is to make “every note sounds the same.” Expressive and stylistically correct phrases requires that each note performs a unique function relative to the overall artistic statement; therefore, it is not helpful to practice in this way that requires rote repetition of musically static drills. Instead, players are coached through a process of adapting a target pattern to various stylistic imperatives, such as altering the phrase to reflect a rhythmic style indicative of the Baroque (or other) period.

Technique is expanded primarily through *demonstration* or *modeling*, which is a scaffolding strategy identified by Kennell (1992) and known to be commonly used within the context of studio teaching; however, Kagarice’s application of this technique is dynamic and adaptable. Common technical studies, such as those by Arban or Clarke, are expanded using progressive musical challenges. For example, after learning a particular scale pattern, the parameters of that passage are altered through *improvisation*. Kagarice will sing the desired inflections and rhythmic patterns, and the student imitates *by ear*. Technique is learned through an aural understanding of the musical context in which it would be employed.

Kagarice also employs unique methods of musical *analysis*. In particular, students identify her technique of *skelatizing* – a target phrase is demonstrated at the

piano with all of the ornamental or non-functional notes removed – as particularly helpful. Kagarice emphasizes underlying harmonic structure, usually by slowing the tempo and blocking chords or arpeggiating melodic figures. This pared-down version of the target phrase is then repeated many times, sometimes with the student responding in imitation. Typically, in order to emphasize harmonic movement, Kagarice demonstrates *skelitized* phrases while continuously depressing the sustain pedal on the piano. The goal is to implant a very clear, fundamental understanding of the basic function of the phrase into the player's musical concept. Lisa describes her experiences with this technique:

Skelatizing the phrases in the piece...really helped me focus on the musical line more than the mechanical side of things. It also helped me to understand and appreciate the piece much more. (Lisa)

Scaffolding Strategies

Dynamic and adaptable *demonstration*, or providing an exemplary model, is the means by which Kagarice engages in the scaffolding strategies of *task manipulation* – temporarily changing the difficulty of a musical phrase so as to facilitate learning of a specific element – and *marking critical features* – highlighting specific aspects of the task. She is also observed using *direction management* – the setting of short and long term goals – and *frustration control* within the context of lessons. (Kennell, 2002)

Supporting her students socially is fundamental to Kagarice's approach, so she provides an ongoing mentorship which assists in the setting of both short and long term goals. Students place high value on her contributions in this area, and trust her opinions regarding their career plans and overall progress. In fact, her enthusiasm is so pronounced that Marc, a doctoral performance student, finds humor in it:

I'm at a point in my career where I am exploring a number of possibilities for work. And, I have been trying to pursue all of them equally to see which one will fit first. And, she has been really great in nurturing that. Anything that I say, well... "I'm thinking of being a professional garbage man!" She knows four people that I can talk to right now that I can go talk to about being a professional garbage man [laughing]! And, if she doesn't know them, then Vern [Kagarice's husband and colleague] knows them for sure! (Marc)

Frustration control also emerges as an important issue because Kagarice's physical approach to brass playing is unique within the field, and students are unlikely to have experienced her method prior to studying with her; thus, she is responsible for guiding them through significant change and periods of insecurity. Kagarice views this as an important issue because if students cannot overcome negative feelings, they will backtrack physically; therefore, goals and attitudes are expressed in positive language. Josh, a doctoral performance major, reveals this disposition within the context of his own experiences:

Frustration is good! It's going to make you better! At least with me, when I got frustrated, it was because I wanted to get better, and I wasn't getting what I wanted. And now, I understand healthy practicing, which is what I didn't ...that was probably the biggest piece of the puzzle. I just played...and played. I played for hours. I never practiced. (Josh)

The benefit of a positive approach to *frustration control* is also evident in the progress exhibited by Lisa – a masters level performance major in her first year of study with Kagarice. During the initial observation of this study, Lisa was working to extend physical release, which was already comfortable in the mid-range, into the higher tessitura. Specifically, the high A (above middle C) appeared to be a breaking point at which Lisa was very prone to excess physical tension and internal backpressure. After exploring this register, Kagarice took her back to a *safe* range prior the close of the lesson. She also supported Lisa's comfort level by carefully explaining that her body was

undergoing change and that confusion is normal. When I again observed Lisa several months later, the lesson was focused on the same high A, but she was effortlessly and consistently playing it. Of the experience, Lisa states:

I found that I surprised myself a great deal today. I never thought that I could just pop out a high A out of nowhere without face. I found a better trust in my own playing today. (Lisa)

Primarily, Kagarice mitigates frustration by *focusing on the solution* rather than identifying problems. This was particularly evident in a lesson with Alex – a senior performance major. Like many of Kagarice’s students, he underwent a significant change in his physiological approach when he began studying with her. During the first observation of this study, Alex was struggling with profound sound issues, primarily in the form of a double buzz – an undesirable, raucous tone which happens when the lips do not vibrating uniformly because the release of tension is in a state of flux – and at one point emotionally remarked, “I feel like I am going backwards.”

Alex was at a tricky stage because he could have immediately stopped the double buzz by returning to his “old” way of playing. His frustration was threatening his progress. At this transitional stage, Kagarice remained focused on the goal by consistently offering positive feedback, reiterating the reasons why change is necessary, explaining how “body confusion” is indicative of positive development, and promising him that things would improve. Throughout, she redirected his focus to the desired goal, and ignored the spasms and twitches that were frustrating him.

Like Lisa, before allowing Alex to leave the lesson, she stabilized his emotional and physical state by returning him to a register and technical level that was *safe*, or functioning efficiently. The following spring, when the researcher observed Alex a

second time, the double buzz had disappeared entirely and there was no mention of it in the lesson. Interestingly, during the time frame of this study, Alex progressed far enough to become one of the finalists in the *International Trombone Workshop* competitions (summer 2010).

Automation

The *automation* phase is *transitional* in that student has learned advanced motor skills, but is not fully autonomous. The teacher continues to guide, but allows the player increasing levels of independence. The primary characteristic of this phase is that the student can efficiently respond to *aural information*. Non-verbal communication – modeling, conducting gestures – triggers efficient motor skills; therefore, demonstration is the principal activities. The sensory and conceptual domains are merged at this level and the player is capable of realizing a musical phrase based solely on auralization. (See “Conceptual” techniques in brass pedagogy) Typically, a student functioning in an *automation* phase will repeat a target musical phrase while receiving ongoing verbal or aural feedback, but sensory reminders (such as blowing down the straw) are not typically used.

Paul describes his experiences performing while in a state of muscle *automation*:

As you are learning this new process – with the repetition of getting into that zone - eventually it will become second nature, and then most of it will just be hearing...and the blowing just will come. (Paul)

At this level, students begin to experience an awareness of their musical autonomy, and this appears to be directly related to the ability to remove focus from physical issues.

Now, working with Jan...there's not all this extraneous physical difficulty associated with playing the instrument. It's just – I actually do enjoy practicing. It's fun to wake up in the morning and go make sounds...now that's there's all this stuff I don't have to think about. I don't have to think about searching for 5th position, or tightening the embouchure to play high notes. I just, think, OK, here's Pergolesi, or here's Tomasi, and play this, so it's actually working on music, and not working on technique or the instrument. (Greg)

As the student progresses through the first three instructional phases, sensory awareness – focus of attention to the outward flow of air and the balance point in the instrument – and cognitive auralization – a clear internalization of sound-based goals – become merged. As Kagarice states, “the air goes down the tube and becomes the exact sound you want to make.” Initially, conceptual training (auralization) and sensory (blowing/resonance) awareness are learned and practiced as separate capacities. Each goal initially moves through separate rapport, information, and training phases, and is learned independently of the other. Through this process, Kagarice asserts that “the brain rewrites the body map to include the tool [the instrument],” meaning the physical mechanisms of tone production become an automatic response to musical thoughts.

Jan talks about...how your brain has an easier time figuring things out if you have a clear goal...“technique is only acquired by having a musical reason for doing it.” The more you think about that, the more true it gets. Because your brain knows, ok, this is the music I want to make, and then all of the other physical motions associated with that, they just sort of happen on their own, the clearer the goal is. (Greg)

For a player functioning at the *automation* level, attention can be redirected and improvement facilitated with minimally invasive interventions. For example, a *catch phrase* – a short verbal phrase which recalls complex topics already discussed at length – such as “good energy flow through the body” will elicit an efficient physical response which has already been learned, understood, and trained. Similarly, the *demonstration* of

a musical phrase is accurately absorbed and repeated by the player without additional physical or cognitive support.

Independence

The final phase of instruction is *transformative*, and generally *emerges* from the process, rather than being directly targeted by the teacher. The ideal level of *independence* occurs when all the mechanisms of musical performance – emotional, intellectual, and physical – are acting in synergy and balance. The student understands the goals, knows how to reach them, feels comfortable acting, and has the physical skills to meet the task. At this level, students describe being in a “zone” which allows them to think and act artistically, creatively, and expressively because the body matches the musical conception efficiently and consistently. Descriptions of this state closely parallel Csikszentmihalyi’s (1996) conditions of *flow*. For example, Greg refers to an “encapsulated time bubble” in which he feels highly engaged in the activity. (See “Supporting Principle #3: Focus of Attention”)

At this stage, Kagarice and the student function as a cooperative dyad. They are supported by well-established rapport and understanding, so discussions are collaborative. Musical ideas are not dictated to the student; rather, the teacher and student work together to solve problems and generate new ideas. There is also a significant amount of musical (non-verbal) communication, as Kagarice demonstrates through singing, playing, or gesture, and the student is capable of realizing these ideas through performance. At the same time, the student takes on greater autonomy and functions without support for long stretches of time. *Musical thoughts become actions.*

The goal is to create a fully actualized musical artist capable of realizing their own ideas through the medium of trombone playing. Joseph, a doctoral student, offers a detailed description of this outcome:

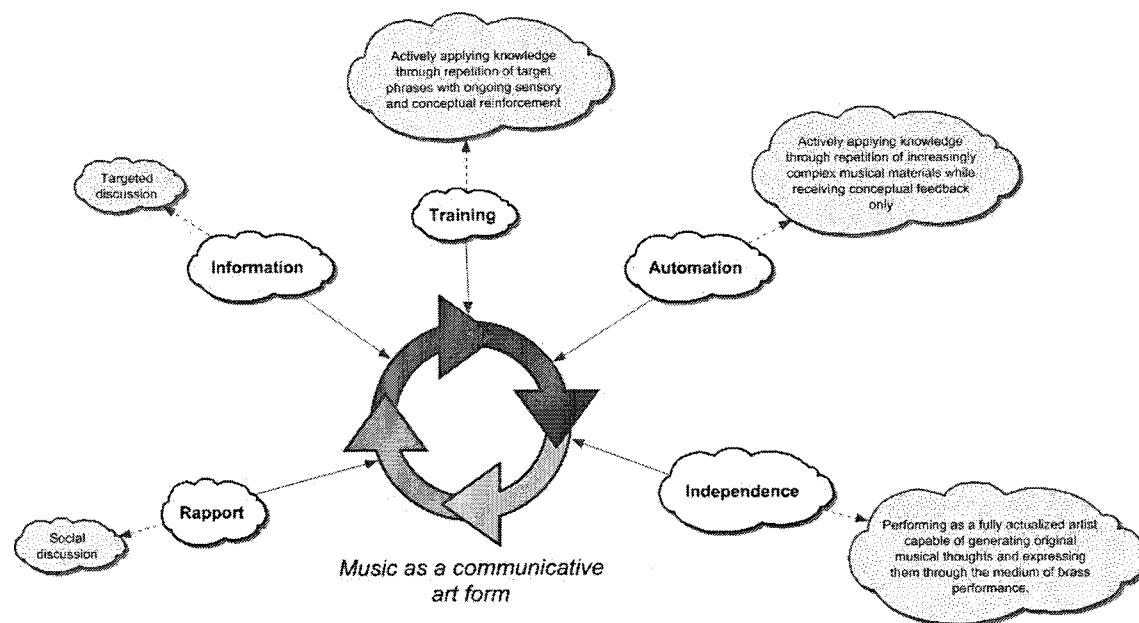
Playing by ear – it is how we play. That’s the biggest thing, and so if these aren’t turned on [ears], you can’t play. Well, you can play, but it won’t turn out positive...As a professional, learning music in that way has saved my butt more than once. Being able to understand how to look at that piece of music, learn how to play it by ear, then turn it around in a performance, under pressure, because it is more thoroughly absorbed. You do understand the music. (Joseph)

Joseph points to a multi-faceted skill-set. The player takes in visual information (“look at that piece of music”), translates it to aural sounds (“learn how to play it by ear”), forms a global understanding (“thoroughly absorbed”), and is then equipped to communicate his own interpretation (“you do understand the music”) within the context of a performance (“under pressure”). In short, a conceptual player learns to *think musically*, and becomes fluent in expressing musical ideas through the medium of an instrument. It is not *only* a procedure for building muscle memory and physical skills; it is learning to *communicate* through music.

At the same time, independence is developmental and first emerges in sporadic, spontaneous stages. The student must practice acting autonomously before becoming fully actualized; therefore, short moments of independence appear before a fully integrated and lasting phase can be observed. Specifically, Kagarice looks for and encourages any aspect of autonomy the student is capable of expressing. Often, this emerges first in an informational phase, in that students can express a concept verbally before they can fully apply it to their own performance. Figure 4 provides is a summary of the primary activities which were observed to characterize each of the five phases and

provides some structure for tracking the development of autonomy within a learner in this context.

Figure 4: Summary of the Activities Observed During the Five Phases of Instruction



Sample lessons

#1 Andrew: Sophomore, Performance major

Table 6: Five Phases of Instruction in Andrew's Lesson

Length of lesson: 63 minutes Date of lesson: March 11, 2010 Transitional/non-instructional time: 6 minutes			
Event	Description	Mode	Length of time (in minutes)
Student-teacher discussion	Kagarice gives feedback on student's resume (as part of semester project)	Information	17
Student-teacher discussion	Discussion changes to an unrelated topic on technology; Kagarice allows student to teach her about cell phones and recording equipment	Rapport	17
Student-teacher	Kagarice explains blowing and resonance	Information	3

discussion			
Student-teacher discussion	Kagarice reviews focus of attention and how this student approaches interpretation of the music	Information	2
Student plays; teacher guides	Student performs short phrases of a Bordogni etude while Kagarice gives constant feedback Physiological training: Blowing on straw; verbal instructions to redirect focus of attention Conceptual training: Modeling, analysis	Training	12
Student-teacher discussion	Discussion changes to an unrelated topic regarding a past teacher	Rapport	3
Student talks	Student explains his understanding of breathing vs. blowing	Independence	2
Student-teacher discussion	The lesson ended with a friendly exchange	Rapport	2

Andrew is a performance major at the sophomore level who struggles with some interpersonal challenges and lagging communication skills. He exhibits difficulties focusing on the task at hand and often interrupts the conversation to change the subject abruptly. In this lesson, Kagarice made extensive use of the rapport mode in order to try and form social connections with Andrew so that he would be prepared to participate more actively and productively in the learning process.

At the beginning of the lesson, Andrew presented Kagarice with a copy of his resume in order to get some feedback on the semester project (which requires that each student submit this document). This initiated an extended period of time in the *instructional* mode, during which Kagarice outlined in detail the information that is typically included on a musician's resume and also provided several examples for Andrew to review.

The topic moved to a focus on the semester recording project, and Andrew and Kagarice began discussing technology in a way that was unrelated to the lesson goals. This was social in nature, meaning it was in a *rapport* mode; Kagarice was talking to the student for the purpose of building social connections. This mode occupied the greatest amount of time in this lesson (30%). Interestingly, this was primarily accomplished by letting the student take the lead. Andrew was highly informed on the topic and began describing audio equipment, computers, and cell phones. Kagarice allowed him a significant amount of time (17 minutes) to “teach” her about this. Throughout the process, she projected the attitude that he was helping her to gain important information about a topic that she didn’t understand. Afterward, the researcher inquired about this phase of the lesson, and Kagarice indicated that she believes this student needs to assert himself and his own ideas within the lesson environment in order to feel safe; therefore, the time spent nurturing rapport was important to his ability to engage and progress in the long term.

After some time, Kagarice redirected the discussion to the topic of resonance and entered into an *information* phase. Andrew explained his understanding of these ideas and Kagarice corrected and elaborated on his explanations until she was satisfied that his concept was clear. This discussion was clearly a follow up to information covered in past lessons.

Blowing and resonance then became the focus of a *training* mode, which was centered on practicing blowing and release using a straw and repetition of a phrase from a Bordogni etude. This discussion began the process:

Kagarice: Why [do we use] the straw?

Andrew: We use straws because it is the same thing as the trombone.

JK: OK...so we just gave this big explanation of resonance, and you are going to tell me that this is the same thing as a trombone. You really think I am going to buy that? [laughing]

A: Well, yeah, you're putting air through the end, that's it. That's all it is right?

JK: OK, so...I'm looking for how are you going to articulate that, how are you going to explain that? What's just like a trombone?

A: Blowing air through it.

JK: OK, the action of it. So, you are doing the same thing that you would be doing to play the trombone. Is that what you are trying to say?

A: Yeah, because blowing air makes sound.

The student began a cycle of playing a short phrase alternating with blowing through the straw, during which Kagarice's feedback was constant, and included verbal directions (such as "let the air go," "feel relaxation and release"), conducting gestures, and singing. Between repetitions, Kagarice also helped the student to analyze the phrase structure and harmonic progression of the target melody. One such exchange went this way:

[Scale tone] 4 leads to 3 [plays on the piano] or 4 can lead up to 5 [plays - taking out the passing tones] see that? That's the skeleton of that. [emphasizing harmonic movement] Hear the structure of it? (Kagarice)

This process veered off track eventually, in that Andrew became distracted and began talking about an experience with a past teacher. Kagarice went with this and allowed the lesson to move back into a *rapport* mode for a few minutes. She then redirected the conversation to the topic at hand, and the student offered his own explanation of the concept of blowing and mental focus to the researcher. This is

categorized as a short instance of *independence*, because the student asserted his own understanding of Kagarice's concepts:

You don't think about breathing, you think about blowing because the breathing will come naturally. So, she thinks about the action... so that's what she does when she's singing along with me – she's telling me what I am supposed to be getting, instead of me thinking about what has to happen for me to get that, because when I do [think about that], that's when I mess up. (Andrew)

At the conclusion of this lesson, the student provided some short responses on the feedback form, indicating that blowing through the straw was the most helpful activity, but that he felt “engaged throughout” the lesson.

#2 Aaron: Senior, Performance major

Table 7: Five Phases of Instruction in Aaron's lesson

Length of lesson: 61 minutes Date of lesson: March 9, 2010 Transitional/non-instructional time: None			
Event	Description	Mode	Length of time (in minutes)
Student-teacher discussion	Student and teacher discuss recent performances; Kagarice congratulates him on what has been going well	Rapport	5
Physical training	Student practices directing air down the straw under guidance	Training	3
Student plays; teacher guides	Student performs target phrase of a solo piece two times; Kagarice gives constant feedback Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Verbal instructions (aimed at redirecting focus of attention)	Training	4
Student-teacher discussion	Student stops to talk about feelings of tension in his throat; Kagarice explains that this is positive	Information	3

	because it means the face is releasing		
Student-teacher discussion	Student makes a joke about the process	Rapport	1
Student-teacher discussion	Kagarice explains form follows function using swimming analogy	Information	1
Physical training	Student practices directing air down the straw under guidance	Training	1
Student-teacher discussion	Kagarice explains why the focus of attention is helped by blowing on the straw, but qualifies that eventually, the student must redirect to the horn	Information	2
Physical training	Student practices directing air down the straw under guidance	Training	1
Student-teacher discussion	Kagarice explains the idea of releasing muscle memory	Information	1
Student plays; teacher guides	Student performs same target phrase of a solo piece two times; Kagarice gives constant feedback Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Task manipulation (changes task to blowing out one note at a time) Verbal instructions (aimed at redirecting focus of attention)	Training	3
Student-teacher discussions	Kagarice explains that her verbal feedback during performance is aimed at the “subconscious,” in that she is trying to redirect focus of attention	Information	2
Student plays; teacher guides	Student performs same target phrase of a solo piece one time; Kagarice gives constant feedback Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Task manipulation (changes task to blowing out one note at a time) Verbal instructions (aimed at redirecting focus of attention)	Training	4
Student-teacher discussions	Kagarice explains Don Jacoby’s concept of sensory tone production	Information	4

Student plays; teacher guides	<p>Student performs same target phrase of a solo piece two times; Kagarice gives constant feedback</p> <p>Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Task manipulation (changes task to blowing out one note at a time)</p> <p>Verbal instructions (aimed at redirecting focus of attention)</p>	Training	2
Student-teacher discussions	Kagarice explains her concept of time feel in terms of targeting the next beat so that the body can “figure out” the space between “this and that,” or from one beat to the next	Information	6
Student plays; teacher guides	<p>Student performs same target phrase of a solo piece two times; Kagarice gives constant feedback</p> <p>Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Task manipulation (changes task to blowing out one note at a time) Verbal instructions (aimed at redirecting focus of attention)</p>	Training	3
Student-teacher discussions	Kagarice explains how she diagnoses the student’s level; she looks for the place where the player loses the ability to focus on function (muscles start reengaging)	Information	3
Student plays; teacher guides	<p>Student performs same target phrase of a solo piece two times; Kagarice gives constant feedback</p> <p>Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Verbal instructions (aimed at redirecting focus of attention)</p>	Training	3
Student-teacher discussions	Kagarice explains that the teacher must be aware that sometimes the sound doesn’t improve, but physical balance does; must equipped to know when progress is happening	Information	2
Student plays;	Student performs same target phrase of a solo	Training	3

teacher guides	piece one time; Kagarice gives constant feedback Blowing on straw (in between repetitions) Marking critical features (musical expression) Modeling (through singing) Conducting gestures Verbal instructions (aimed at redirecting focus of attention)		
Student-teacher discussions	Kagarice explains that the point of this lesson what to get the body to release, primarily through redirecting focus of attention to outward flow of air	Information	5

Aaron is a senior-level student, but at the time of this lesson was in his first semester of study with Kagarice. Having previously encountered her instruction within the context of chamber music class, he chose to pursue applied study with her as well and recently transferred from another studio. Although their work together in this context was relatively new, based on prior experiences, the rapport between Aaron and Kagarice was productive and positive, so interestingly, relatively little time was spent in that mode (8%).

Aaron exhibited a calm demeanor and took direction well. He appeared to follow Kagarice's instructions to the best of his ability, despite the fact that moments during this lesson were frustrating and/or represented change for him, as he describes:

She's got a goal, she's got a destination in mind and she's doing something to get me there. It's like I am kind of along for the ride. I am going to sit back and be neutral and accept whatever she's giving me – process it.

Aaron is an advanced player already, and in fact has been very successful both in school and professionally, but continues to struggle with some issues of physical tension, especially in terms of “setting” the embouchure. This lesson was primarily focused

(43%) on a training mode, with the emphasis mostly on physiological/sensory training. Conceptual/musical issues were also discussed, with some short instructional phases interspersed for the purpose of reviewing concepts.

During this lesson, Aaron played only a single legato passage taken from the opening of the solo piece he was working on, which was repeated either all or in part a total of fourteen times. Conceptual/musical training (comments on style and phrasing), constant sensory/physiological reinforcement through the use of the straw, blowing practice, and physical manipulation of the muscles of the face in order to promote release were interspersed between repetitions. Kagarice also offered verbal feedback in the form of encouragement, so that Aaron knew when his actions were on the right path, and directives, which instructed him on where to focus his attention.

The following is an example dialogue taken from a repetition, trial and error cycle employed during a training phase.

Kagarice: What is the passage, how are you moving up? He [the composer] does this in his other piece [demonstrates at the piano]. He's good at that, he likes that pattern! [Kagarice directs Aaron to blow down the straw several times] Find the resonance with the air.

Aaron: [Performs passage]

JK: Yeah, here [points to music], I don't think that's the same kind of lift, as in Baroque style. I think it should go to the F#, you know what I mean? I don't think that's a good mark [points to music]. It changes the whole style. [Kagarice directs Aaron to blow down the straw several times] Wide open and let the air through [Kagarice manipulates Aaron's face, moving the muscles in a random pattern as he blows air]

A: [performs passage]

JK: See, that was more wide open and then you wanted to back off....then you were afraid of losing air. I want you to waste air for a bit. [Kagarice directs Aaron to blow down the straw several times]

A: [performs passage] I think I backed off a little bit

JK: But, you are aware of it. We are messing with your air and it is really throwing you off and that's good! That's really good! Change is good! And I know we are going in the right direction. You're in between the two things, it's kind of confusing. You're wanting to balance here [indicates embouchure] and then the air keeps pulling you out here [in front] and then you want to come back...

When necessary, this process moved into an *information* phase, usually in response to a question from Aaron or a change in what he was doing. In the following excerpt, Kagarice and Aaron discuss his awareness of internal tension, which, at the end of the lesson, he identified as being the most significant development for him that day. Kagarice begins with a feedback loop as Aaron plays, and then the two enter into discussion:

Kagarice: [As Aaron plays] Where are you going to? What is the air going to feel? Stay out there. Keep your brain where the resonance is. Keep your focus out there. That's it! Good job! You're out there! That's it! Stay out there! Where is it? Feel it! Out there! Stay out there. It's at the resonance. Keep your brain at the resonance. Out there. The air meets the resonance. Yeah. The air meets the resonance. Much more ringing.

Aaron: [Concludes phrase] Ugh! I hate that! My tongue is automatically going in to like...reset the system in between each note.

JK: Yes, I know, that's what I'm talking about.

A: It's driving me nuts

JK: That's ok. We are going to do it again. We are resetting the system. I promise this will get way better, but there's going to be a little bit of a transition. Ask Ian and Lisa..in the fall...Ian wanted to kill me with the double buzz! They are both sitting in orchestra and they both have a double buzz you could drive a truck through on an A. [To the researcher] Were you in the room when Ian was going through that?

Researcher: Yes! [laughing]

A: [Performs passage]

JK: [As Aaron performs] It's like you are literally just sending the air down looking for that pitch. That's it, find it with the air, the air itself. The air is finding resonance with that pitch. Where is it? Feel it with the air! Feel that balance change? That's your tongue trying to do it. It's ok! That was better than the last one. Could you tell that was substantially better than the last one? Just a couple of little, gentle, right through the straw. The air is going down looking, to feel...the air is pitched and it's looking for that resonance. Feel that resonance with the air...you came up short with the air. Find the resonance with the air. Move the air. Move the air. Good let's do that again.

Kagarice also entered into the *information* phase, and reviewed several key concepts. Here, she involved the researcher and explained several key aspects of how she was working with Aaron, particularly in terms of his process of releasing and how to transition from blowing on the straw to blowing into the horn:

Aaron: I am noticing more tension in my throat.

Kagarice: [To researcher] When they notice that there is tension in their throat, that means the tension is coming away from here [embouchure]. Ask Lisa about this. She had no idea she was using glottal articulations until she released this [embouchure]. She has quite a bit of glottal. It's involuntary. There is quite a bit of tension that we have because again we are trying to hold the air back, so the more you say let your air go - I want it to be wide open, even if you miss every note. But, it's not - just let it go, because if you let the air go and [the embouchure] is like this [demonstrates tension], the air is going to come back and smack you. So, [blowing] is again, nothing. I am not really directing [air] except mentally. [Demonstrates a swimming stroke] I'm not directing my hand except mentally, I am noticing...I'm feeling that water going back. I am not saying "ok I've gotta go in this way," instead "it's where is that water?"

A: Yeah, and everything else follows.

JK: Yes. [Kagarice directs Aaron to blow down the straw several times]

A: [Performs passage]

JK: [As Aaron plays] Everything out of the way, everything's released....yeah, great. The beginning of that was the best yet. And [speaking to the researcher] the only problem with this [straw] - is that I want to get the resistance out of the way so he can get to the balance point, but if you do too much of this [blowing on the straw] the focus of attention will get too close. We have to learn to release this because he has a grip on the

[embouchure] and so that needs to be let go, but only by the sound of this [blowing] and the instructions of release. The air has to go down the tube and I have to keep directing his focus further and further out into the instrument. So you don't want to do too much here [straw] without doing it here [indicates the horn]

In the last few minutes of the end of the lesson, Kagarice summarized a number of concepts for the researcher. Aaron responded positively, but again indicated that he was becoming increasingly aware of tension in his throat. In response, Kagarice explained how the process of release brings long-standing tension into focus because the body is now equipped to sense it.

Kagarice: So, what I did, Karen [to the researcher], is I wanted to get everything all opened up, so 'I am doing nothing,' and keep telling his body nothing, nothing, nothing...it's out there [indicates the instrument], because then I could say, the other part of..."you've got to move air, you've got to move air to get out to that resonant spot." And so, that's the prescription. It's the last thing. I want to leave him with that. "I can't forget to move air, I can't forget to blow, that's really important, no matter what else." Because, it's the moving air that makes the sound...you don't find the balance point without moving air, without, BLOW! That one felt better, yeah?

Aaron: Getting better and better, but I feel it here oddly enough [indicating his throat] it feels more open, but then this...

JK: You start to feel things that were there the whole time that start to release because it's now talking to you, it's saying "do you want me to do something, or not?" It was there the whole time, in fact, I can tell you right where it released, right here, on this [points to music], it actually was discoordinated, which is good. Lisa's is coordinated with what she does. She has a glottal thing, and that means it is very trained in. When it's discoordinated, it's a random firing, so it did it here, but out of synch. It was confused, like, "I'm not supposed to play along?" It realizes it's unnecessary. When it still fires on time, it's clueless...it's like 'Oh, I am supposed to play along!' Does that make sense? It's the neurons that fire together wire together. And, when it's not quite in synch, it means it's becoming disconnected. It's like, "Whoa!! Wait a second, I wasn't needed!" Does that make sense? [Aaron nods in agreement] Yeah, the coordinated part...Lisa could be diagnosed with Focal Task Specific Dystonia, because it technically is. Because the glottal articulation is...it's an involuntary muscle spasm superimposed on a voluntary movement. You have something that's unnecessary, basically. But, again, it doesn't become clinical...you are not

clinically an alcoholic until you lose your job. That's sort of it...it can be there, but it doesn't become clinical until it's destructive enough...We all have little idiosyncrasies because we were all taught too much. It doesn't matter what we do...in everything we do. So, your prescription is really, "blow freely." That comes from Bill Cramer. "Blow freely." And, have a clear idea of what you are doing all the way through...freedom, freedom, freedom...

At the end of the lesson, Aaron responded on the student feedback form and indicated that: "The further into the concept/focus we go, the more engaged I am," and that it was most helpful when he had the opportunity to repeat the phrase, "until it felt better," rather than just rushing "on to the next thing." He also reported that he was most surprised to find out that the process of releasing would uncover more layers of tension of which he wasn't previously aware, as he states:

[It was most surprising] talking about tension in the neck, throat, mouth, etc...Jan said it's because as I relax/loosen up/blow, I become aware of pre-existing tension.

#3 Josh: Doctoral student, Performance major

Table 8: Five Phases of Instruction in Josh's lesson

Length of lesson: 65 minutes Date of lesson: March 11, 2010 Transitional/non-instructional time: 5 minutes			
Event	Description	Mode	Length of time (in minutes)
Student-teacher discussions	Josh talks about his experiences as a teacher Josh: "I try to make it a priority not to play in lessons because I want them to hear it – I want to increase their imagination – I don't want to play because I don't play perfectly." Kagarice: "But, you are a better player than they are – hearing you play will help"	Rapport Information Independence	8
Student-teacher discussions	Kagarice tells a story about a former student who is now famous; he had a very unique way of	Rapport	5

	playing that wasn't characteristic	Information	
Student-teacher discussions	Student and teacher discuss the drawbacks of teaching through modeling; student can pick up any bad habits of the teacher	Rapport Information Independence	3
Student plays; teacher guides	Student performs target phrase of a solo piece; teacher offers feedback Student practices directing flow of air down straw Student catches himself leaning into the straw with his body and corrects autonomously	Training Automation	3
Student plays; teacher guides	Student performs target phrase of a solo piece; teacher offers feedback Kagarice switches to using the straw in the mouthpiece Student comments on the efficacy of this method ("There is no translation or explanation needed. It's all just right there.")	Training Independence	3
Student plays; teacher guides	Kagarice asks student to improvise on the harmony of the phrase (Bb diminished)	Automation	3
Student-teacher discussions	Student and teacher discuss the musical features of the piece, collaboratively deciding on style issues	Information Independence	4
Student-teacher discussions	Teacher explains the Montessori Question and student corroborates, explaining it to the researcher	Information Independence	5
Student plays; teacher guides	Student performs same target phrase of piece, but misses a note; Kagarice redirects to musical sounds Josh: I never miss that note! Kagarice: [Demonstrates phrase several times at the piano.] Josh: I guess I don't miss that note usually because I really like the way it sounds! Kagarice: Right, I love that part!	Automation	3
Physical training	Student practices directing air down the straw under guidance Josh: I get that we are using this to build the connections of what our body needs to do for each part of the phrase. We are speeding up the process	Training Independence	2

	of making that connection.		
Student plays; teacher guides	Student performs same target section of piece; Kagarice offers verbal feedback Marking critical features (in terms of compositional elements to emphasize)	Automation	3
Student-teacher discussions	Student and teacher discuss focus of attention; Kagarice explains that some people are visual and will actually look up at the visual cortex of the brain in order to help focus	Information Independence	3
Student-teacher discussions	Kagarice sits at the piano and begins playing through some of the phrases in the piece, emphasizing interesting harmonies or other elements; student joins her and they collaboratively investigate compositional elements	Independence	6
Student plays; teacher guides; Student-teacher discussions	Student performs same target phrase of piece; Kagarice offers verbal feedback Redirect focus of attention to compositional elements (“What’s happening here?”)	Automation	4
Student plays; teacher guides	Student performs same target section of piece; Kagarice redirects to sensory awareness Kagarice: That’s not released. I am looking for release all the way through.	Training	1
Student plays; teacher guides	Student performs same target section of piece; Kagarice offers verbal feedback Redirect focus of attention to compositional elements (“Where does this go?”)	Automation	4
Student-teacher discussions	Two observers (Kagarice’s next student and another trombone teacher) had entered the room and the lesson concluded with a friendly dialogue between everyone	Rapport	2

Josh is a doctoral student who has studied with Kagarice since the time of his master’s degree program. The two have a long-standing and very close rapport. Josh is very familiar with Kagarice’s methods and reports using her process both in his own practice and with the students he teaches, as he explains:

I use it with my students by, mainly focusing on what the music is supposed to sound like. I don't give a lot of instruction on how to do anything, except where to put the air. And, that's basically what Jan does as well, so I am copying her... when I am teaching my lessons it's a personal goal to increase their enjoyment, and also to increase their dissatisfaction. To be really demanding, but always on the music, not on the player...stimulate their passion to make the music better, and as a byproduct, they become a better trombone player.

Because Josh is highly experienced and already equipped to function independently on a number of levels, the instructional modes were more freely applied and dynamic in his lesson, as shown on the above chart. Kagarice's role as the teacher has evolved into a more collegial relationship, in that Josh can now respond to her words by adding his own ideas, experiences, and insights. For example, when Kagarice asked about the expressive features of the music, ("What's happening here?"), this sparked a quick-paced but very productive exchange during which the student and teacher collaboratively made decisions about how to proceed musically:

Kagarice: [Demonstrating harmonic structure of the phrase at the piano throughout] So, what's happening here? This goes only to a mezzo-forte...so you've got the [plays piano] right? And to me, the next thing goes into the [plays piano]...this introduction. To me that's all connected.

Josh: [Sings in imitation of what Kagarice played]

Kagarice: I hear that it's part of this [plays piano] This is more - instead of staccato, I think it's more deliberate. Because it never means that anywhere else. Do you hear that?

Josh: I hear it like that, but this part is a new phrase but it's stealing from this [points to music].

Kagarice: Absolutely, I completely agree for sure.

Josh: Imitating that but a new idea.

Kagarice: It's coming out of that...[plays piano]...it grows out of this cell...[plays piano] So this one does it...and it only gets to...[plays piano]...I don't think it's as much as this one. I think that's a little bit overrated. Don't you think?

Josh: It's probably because it's the same idea building through this line.

Kagarice: I think this one's going to be more and then...

Josh: It's like this forte is to this mezzo-piano...

Kagarice: Yes, yes, yes! I understand what you're saying.

Josh: He just wants that new line to build

Kagarice: I hear this [singing and playing pno] that's one color, and this is a different [playing pno]

Josh: It's searching

Kagarice: Yes, searching [playing piano] and then here it is! This to me is more wondering and less...it's moving [playing at piano] see, even that goes on [playing piano] So, in this second half, I think this can...move ahead, but not a lot, I don't think...this is more than that and more...I think there's more passion, more searching, until...

Josh: I am wandering, I am questioning, until...

Kagarice: Yeah. [indicates Josh should blow on straw] Not released, I am looking for a release. There you go. What's the energy for this?

Josh: [performs passage]

Kagarice: I think this doesn't need to go that fast...

Josh: More deliberate?

Kagarice: More deliberate.

Although she continues to reinforce aspects of the training mode through blowing on the straw, providing short feedback reminders, and discussing the music, Josh often responds positively and accurately to aural information alone, and so is equipped to realize a musical phrase entirely on conceptual information, meaning his motor skills are automated and he can function independently as an artist/musician. It is very difficult to capture of the scope of the student-teacher communication in the above quote because throughout the process, Kagarice and Josh sang together, played at the piano, and

communicated non-verbally. It is more a moment of musical collaboration than any sort of teacher-based instructional mode.

Despite Josh's advanced abilities, the lesson began with an emphasis on physiological/sensory training as Kagarice directed him to practicing moving air (using the straw) and release musculature. This was reinforced through ear training, as Kagarice played key parts of the phrase on the piano and/or modeled through singing, and verbal feedback, such as: "Wide open, release...relax...no instruction to direct...release any instructions, just let the air go..."

Josh's lesson focused a longer (approximately 2:30 in length) and more technically demanding passage of music than either Andrew or Aaron, but despite his advanced level, the repetition, trial and error process was still employed. Josh repeated the target passage either in part or in its entirety a total of twenty-two times, with the last two being primarily in a performance mode, as two observers (another trombone professor and Kagarice's next student) had entered the room. The lesson concluded with a friendly exchange between everyone in the room, including the researcher, as Kagarice asked for feedback about Josh's performance.

Shared Value System

Although teaching strategies form the crux of many research-based assertions regarding effective applied teaching (Kennell, 1992; Duke & Simmons, 2006), the totality of the studio environment has also been targeted as an important learning context. (Clemmons, 2007; Miksa, 2008) At any given time, an observer in Jan Kagarice's studio will see relatively clear-cut and delineated instructional practices which can be traced,

categorized, and named (the *five phase model*); however, viewing these behaviors as discrete, definable events fails to capture the underlying social structure which shapes and defines them. There is a *shared value system* at work in this context, meaning the actions of the student and teacher are integrated through a collective understanding of the goals and reasons which inform them.

This is a product of several factors. First, Kagarice operates from the standpoint of a well-defined teaching philosophy, so her actions are organized and consistent. In this respect, she functions as a *model* of ideal behavior (Grasha, 2002). Second, Kagarice actively communicates her philosophy within the context of lessons so that the actions she asks students to take are directly informed by the principals which shape them. The student then interprets, applies, and understands her philosophy in terms of his/her own experiences and practices, so it then becomes collective knowledge and forms the basis for a cultural identity which underlies all of the actions and behaviors within this community of learners.

A *teaching philosophy* is a summary of the personal attitudes, beliefs, or insights which guide and shape instructional behaviors and/or strategies. It is a way of articulating motivations and bringing structure to the teaching process by creating categories around learning activities and desired outcomes. As a pedagogue, Kagarice asserts that it is important to reflect on why and how we teach. She states, “To be effective in doing it [teaching], you need to know why you’re doing it first, and I think as pedagogues, we really need to ask ourselves that question.” This quote characterizes her philosophical stance: she does not take action herself without a clear motivation for doing so. Every behavior within the studio has a purpose and meaning in terms of larger goals.

Similarly, Kagarice structures learning such that action is consistently informed by a clear understanding of its purpose, scope, and goals; therefore, the first instructional strategy is to provide the learner with contextual knowledge. This was immediately apparent to Greg, as he explains:

My first lesson, she said “ok, play your warm-up routine, and just explain what you are thinking about while you do it.” And I did that for 20 minutes, maybe. And, then after, she just basically...got into...a two-hour explanation of, ‘this is the way your brain works when you play music. This is how I am going to teach you.’ At first, it was kind of like, Woah! Slow down! But everything she said that weirded me out at first, after a few weeks, it was like “Wow. She was right about that.” Everything has...been verifiable. Not always instantly, but over time, it just proves itself over and over again.
(Greg)

What is significant is that for Greg, the process of understanding began with what Kagarice told him, but then evolved based on his own experiences with the information. He was not only told *why* he should take action, but was given the space to apply those ideas. In the end, it was his own connection to the process that solidified the process because Kagarice’s ideas were “verifiable” within this own practice. Kagarice’s teaching philosophy evolved into a *shared value system*. It is not only her perspective, but the ways in which her students understand and use her ideas that define their behaviors.

To observe this group and glean meaningful information from its practices, the reader must be socialized into its cultural identity. As Kagarice states, “It is not enough to write down the steps one takes...it is the *why* behind it that matters.” For this reason, the researcher has chosen to outline Jan Kagarice’s teaching philosophy as it emerges through a shared value system, meaning as it is practiced by all participants in this setting, before providing an overview of the specific strategies which are observed in

lessons. The aim is to provide a contextual basis for analyzing in detail the parameters of Kagarice's methodology.

Data was gathered both from observations of her discussions with students and through researcher-subject interviews of both the primary and secondary subjects. Eleven distinct topic areas emerged from these sources. Of these, four appear to be structural, in that that they are overarching themes which influence the purpose or intent of several other topics, five function in a more supportive role, because they are targeted at specific learning outcomes, and two are supplemental in that they are prevailing attitudes, rather than specific behaviors or practices. Table 9 lists the eleven principles of the shared value system observed in this context.

These ideas will be presented and reviewed in an order which reflects their application in lessons, as observed either in student-teacher communication or in the behaviors Kagarice chooses. In a general sense, these principles are somewhat hierarchical in that each one builds on and relates to those which precede it. Although these concepts are fully integrated within the lesson context, for the purpose of clarity, they will each be discussed in turn, and then reassembled as a whole in Chapter V.

Table 9: Shared Value System

Structural	Supporting
<ul style="list-style-type: none"> <i>1. Why, What, and How</i> <i>2. Communicative Art Form</i> <i>3. Independence</i> <i>4. Finding Balance</i> 	<ul style="list-style-type: none"> <i>1. Rapport</i> <i>2. Safety</i> <i>3. Focus of attention</i> <i>4. Form follows function</i> <i>5. Balance and Resonance</i>
	Supplemental
	<ul style="list-style-type: none"> <i>1. Expanding what works/ positive language</i> <i>2. Technique is a process, not a set of skills</i>

Structural Principle #1: Why, What, and How

Kagarice frequently states, “Why I am doing it makes the world of difference [in terms of] what I am doing.” The broadest and most pervading concept behind her approach is an idea which she summarizes as *why, what, and how*. *Why* refers to the student’s goals, or their motivation for studying the trombone. *What* is the specific actions, strategies, or behaviors that lead the student toward those objectives. Based on this, *how* performance is realized depends upon *why* and *what*. For example, a player who aspires to be a chamber musician needs to develop a sound concept and stylistic understanding conducive to that medium; therefore, the techniques, methods, and goals of their lessons will be different than a student desiring to focus on jazz.

These concepts motivate behaviors at all levels of her teaching in that every interaction with the student is seen as having targeted purpose. From an instructional standpoint, the corollary is that in order to build a methodology, the teacher must first understand her own motivations, or *why* she is teaching. The specific strategies which are chosen and implemented, or *what* we choose to do as a teacher, fall into place naturally based on the clarity of this understanding.

Kagarice states, “The essence of my philosophy is that your actions are based on *why*.” From this perspective, the inner life of the teacher, her thoughts, feelings, motivations, beliefs, etc...plays an important role in the studio environment because it informs and colors all of her actions. Music is a dynamic art form with many component parts, any of which can be instructionally emphasized at a given time. Which of these the teacher chooses to target both in the short and long-term will be based upon what she

values; therefore, it is vital that any teaching activity be informed by a well-articulated value system. For Kagarice, the *why*, or the motivation behind her teaching is to empower the student to function as an artist (See “Structural principle #2).

Kagarice also applies this level of mindfulness directly to instructional procedures by guiding students through a process for articulating their own *why*, or goals. At the beginning of each semester, all students are required to attend a “goals meeting,” which she describes as a planning session. The student articulates his/her motivations, interests, and career plans, then collaborates with the teacher to set goals and chart a course of study aimed at targeting his/her own aspirations. This is the first step in an ongoing cooperative dialogue which continues between student and teacher throughout the course of study. Kagarice describes this as being “all about them...you’re drawing forth what they know, and you’re drawing forth what their interests are.” This also gives Kagarice a clear understanding of what the student aspires to achieve (*why* they are studying), which in turn equips her to facilitate (*what* will happen in lessons) those goals.

At the same time, the instructional process also requires that student’s motivations and understandings (*why*) be expanded through the acquisition of new information; therefore, a significant portion of lesson time, especially during the initial stages of instruction, is dedicated to detailed theoretical discussions on aesthetics and pedagogy. (See “Discussions” under the “Five phases of instruction”) She states, “It’s not enough to write down [or teach] the steps one takes; it’s the **why** behind it” that determines the *quality* of our actions.

Understanding always precedes and informs *action*. For example, once the student is working on repertoire, the *why/what/how* principle is applied through the notion that musicality, or the *why*, informs technique, or *what* we have to play. Kagarice states, “No technique was ever arrived at without a musical reason for doing it.” The more clearly the student can conceptualize the emotional affect, expressive intent, stylistic nuances, and musical contours of a targeted phrase, the more intuitively they will understand *what* they should play. Through repetition, trial and error, the clarity of the musical phrase is translated into the motor skills required to realize it.

Structural Principle #2: Music is a Communicative Art Form

Why/what/how is the first structural principle because it has implications for many aspects of Kagarice’s process. Although it is very simple, the idea of linking *understanding* with *doing* implies a certain level of accountability, which is an important aspect of Kagarice’s instructional approach. Interactions with students always have a targeted goal in mind, and conversely, all actions are aimed at achieving a common outcome. At the largest level, Kagarice’s objective is to teach an aesthetic view of music as a communicative art form; therefore, all of her strategies bear some connection to this overarching purpose. She asks: “What is the measure of a teacher? Is it how well the student plays, or what kind of person they are – how much they love music?”

This statement takes a holistic view of the learner. Kagarice defines an artist as a high-functioning, fully actualized individual whose skills and perspective equip them to have a uniquely positive impact on society. She relates this to the Montessori adage “global peace through education,” and aspires to affect far-reaching positive social

change using music as a catalyst for exploring oneself and the world in which we live.

Kagarice explains it this way:

I do it because I want to change the world, because I want global peace through education. That effects every single interaction with every student. I want us to have a happier, healthier world where people help each other and I want to do that through music because I think music is so powerful. Music is such a healing thing...it's a healing act, and so...I have a very clear idea about why I am doing it and that answers the "what"...what my methodology will be. It's so that ...everything around them inspires them. And then...that pervades in everything that they do. That is their vehicle. The "why" I am doing it as that I want...their music to...express feelings from humanity, about humanity, to humanity - so that they help other people to connect. (Kagarice)

To that end, she views her primary goal as training the *whole person* who is the artist, rather simply teaching the motor skills required for trombone playing. She explains:

It's really about learning how to look. To not just look, but to see - and not just to listen but to hear. It is the basis of all learning...if you're an artist...you have a constant awareness of what you see - to see and to appreciate and value. That's what I am talking about with the students - guiding them to become an artist...to cause them to look in a way that they really see - they start to see things that they never saw before and they start to hear things that they never heard before, and they start to make their own generalizations. (Kagarice)

This description displays an important link to the *why/what/how* principle. The role of the teacher in this process is one of facilitator. Rather than dictating specific expressive devices, the teacher guides the student toward a level of mindfulness which opens opportunities for meaningful observations and authentic encounters with the art form. This leads to a deeper level of experience and understanding that is fundamental to the artistic mindset. Musical expression is a manifestation of the student's own thoughts and feelings, rather than a copy of what the teacher values. Kagarice works to bring students in contact with their own "why."

From this perspective, the development of an artistic temperament is an individualized, internal *process*, rather than a skill-set; therefore, students must be trained in an expressive mindset from the earliest stages of instruction. As Kagarice states, “practice performing...the goal of music is communication, not perfection.” The purpose of this approach in terms of motor skills is for the player to reach *automation* (See “Making a match in music”), meaning the physical movements required for performance are controlled without conscious directives. In this state, motor skills are an automated response to musical thoughts; they are muscle memory. This allows conscious thought to be focused on expressing ideas. In order to develop this capacity, students must *practice for performance*.

Borrowing an analogy from technology, Kagarice asserts that performance is a *copy* of practice. Like a computer, our bodies will simply print (or “CTRL-P” the computer keyboard shortcut for print) whatever we have “typed” into our brain, meaning whatever thoughts and actions have been repeated the greatest number of times. If practice time is primarily focused on properly manipulating muscles, the player never practices imparting musical ideas. Musical automation and a communicative, artistic mind-set is not simply a switch which can be activated; rather, expressing the emotional language of music must be an ongoing quality of the relationship between the player and the instrument. It must be integrated into practice, as Kagarice explains:

The body is going to do in performance what is normally does. So, if you are sitting in the practice room and you are practicing the trombone [speaker’s emphasis]...and now all of a sudden you go out on stage and you think, “ok I am going to communicate that musical idea”...it’s a completely different function in the brain! It doesn’t come out and people don’t understand why it doesn’t come out. It’s because you haven’t practiced that. So, you’ll hear me say to students, “Tell them [the audience]...ok what was that again? I am

sorry, I didn't hear you, I didn't understand you," so that they get that sense that it's always a communication, even if it's a long tone, you are always sending an energy. What do you mean [by what you are playing]? What are you saying to that person? What is the affect? So, we want to always be set on performance...when we think of the computer, it's like CTRL-P...control performance...that's a controlled performance because you've got it under control, that's what you've practiced. (Kagarice)

Despite the cause and effect nature of the CTRL-P analogy, it is not mechanical or based on rote repetition; rather, it is linked to the ongoing evolution of an artistic temperament within the individual. As students develop, they gain deeper understandings of the expressive qualities of music. Over time, this insight becomes intuitive, or a part of their artistic vocabulary, so that what they express becomes more detailed and nuanced.

Structural Principle #3: Independence

The purpose of instruction is for the student to gain information and practice implementing it under guidance, until such time as they can function independently. This is a priority for Kagarice on two levels. First, if meaningful progress is to occur, the student must be mentally and emotionally equipped to function autonomously during practice time; therefore, they must have enough information to understand the process and feel comfortable taking action. Second, Kagarice defines the artistic temperament in terms of the ability to make novel observations about the world and to express those ideas through the medium of music; hence, the artistic perspective is dependent upon individuality

For these reasons, guiding players toward their own efficacy is built into the instructional process. First and foremost, Kagarice encourages students to question her

approach. If the learner feels an internal conflict because some aspect of what she is asking him/her to do seems unreasonable or incorrect, she wants that point of contention to be immediately voiced so that it can be resolved. Kagarice sees such dialogue as a valuable way for the students to take ownership over the experience because they can become confident in every aspect of the methodology. Ultimately, this helps them to act autonomously. Kagarice asserts: "It's not my methodology. It's theirs to share with each other. I want them to question me - to feel free to question."

At the same time, Kagarice parlays this into learning situations geared at boosting the student's confidence. For example, she will sometimes purposely make a mistake (through modeling or explanation) to see if the student notices it. If she/he does not, the teacher learns where the student's skill level is without directly challenging their self-esteem. Conversely, if the student does catch the error, it is an opportunity for them to apply new skills and gain confidence taking action, thereby setting the groundwork for autonomy. She explains it this way:

When a student says, "I can't do this," sometimes it's helpful for me to miscount [the rhythm]...or for me to make a mistake on the piano - so he hears the error. The fact that he heard the error showed me that he could count it, and instead of him thinking he had a problem, he's thinking, "well actually I did pretty well!" It empowers him...I am giving him what I want him to do, but I am making him think it is his idea. (Kagarice)

Kagarice also frequently uses a strategy she refers to as the "Montessori Question," which is a method of inquiry aimed at ensuring success for the student. The technique is based on two conditions. First, the student is only asked questions to which they know the answer, and second, body language and sentence structure are used in such a way that the student "can't miss." For example, Kagarice might ask about dynamics by

saying “What happens here?” while executing a conducting gesture for *crescendo*. The student, so prompted, is almost assured to answer correctly.

This type of dialogue builds confidence over time because the learner experiences their own knowledge and efficacy. Josh, a doctoral student who has employed the *Montessori Question* in his own teaching practice, explains it this way:

The Montessori question is brilliant because it's telling [the student information] in a way that they feel like they're saying the answer. They feel this confidence because they are the ones with the answer...so, they don't question themselves. (Josh)

The goal is to empower the student to function autonomously by creating learning situations in which the individual continuously experiences examples of his/her own ability to apply knowledge correctly. This is expanded by bringing students into the mental and emotional state of musical expression so that self-expression becomes habit, and will therefore appear consistently in performance. She describes the goal of each lesson this way:

I want to get you into that state of flow. That's the goal of every session - to get you into that state of flow where you are efficiently communicating thoughts [and] you are efficiently communicating the sounds that you want to communicate. (Kagarice)

Evidence of this outcome is apparent in students' descriptions of concert experiences. For example, following a very successful and expressive solo performance, Lisa described her mindset this way:

I had a take no prisoners attitude! My thought was that tonight I am going to take the orchestra, the conductor, and audience, and everyone on a really fun ride. I am going to tell a story. (Lisa)

Lisa is displaying the ideal artistic intent. As Kagarice states, she feels “she has something to offer, and nothing to prove.” Significant in this quote is the fact that the student makes no mention of the trombone or the techniques required to play it; rather, she is fully focused on actualizing her own artistic voice within the public sphere.

Aaron also points to a performance situation as a moment during which Kagarice’s methods were particularly helpful. He recounts a recent concert during which he was feeling very physically fatigued and feared he would be unable to meet the demands of the music. When he realized how difficult it was for him to play, he made the conscious choice to implement Kagarice’s methods. He felt equipped to diagnose his own status and to take action to correct it, as he explains:

I was not feeling so great, but I was just trying to apply the concepts...I was really, really tired...I was falling off notes in the staff and I thought, how am I ever going to get through this concert? But, I started just blowing air, and it actually got better by the end of the night. It actually got easier to play. I was playing better lead stuff than I have probably ever done, which is really bizarre! (Aaron)

Similarly, students who are experienced enough to be working professionally report implementing Kagarice’s methods with their own students. This indicates the presence of two primary factors. First, the students feel confident in their own understanding of the process and so feel equipped to implement it. Second, Kagarice’s methodology has worked for them, so they feel it is worth passing on to other players; essentially, it has become their own methodology. Marc, a doctoral student, is enthusiastic about his experiences in teaching in this way: “The more I try this with younger players - people who have been playing a month, maybe two months - I find that they pick this stuff up really quickly.”

Structural Principle #4: Finding Balance

On the wall in Kagarice's studio there is a poster which reads:

The mind is like the wind; the body is like the sand. If you want to know which way the wind is blowing, watch the sand. (Quote credited to Bonnie Bainbridge Cohen)

This statement summarizes an integrated view of the intellectual, emotional, physical capacities which impact the learning process. In a handout titled "Properties of Performance," (See Appendix H), Kagarice defines the target skills/understandings of each of these domains:

- Intellectual:
 - Audiation: hear pitches, timbres, and articulations
 - Know interpretive/stylistic reference
 - Know structural reference architecturally, harmonically, and rhythmically
- Emotional
 - Access the thoughts and feelings about oneself and others (humanity) and be open and able to communicate
- Physical
 - Relaxation
 - Airflow
 - Embouchure (lips in position to respond to the air flow and the auralization)

The overarching goal of applied instruction is to bring thinking, feeling, and doing, into an efficient *balance* within the individual. By contrast, most brass methodologies primarily stress physiological issues, which Kagarice feels are over-emphasized, while affective states and cognitive understandings are not addressed. She firmly states her belief that a solely physical approach is incomplete with the assertion that "physiology is not pedagogy," meaning an understanding of the mechanics of playing alone does not constitute a complete methodology for teaching or learning.

Kagarice explains this perspective based on her personal observations of how students retain skills or information. She asserts that physical changes are fairly easy to make in the short term, but are unlikely to remain in place or improve over time unless the player understands what they are doing and feels comfortable with the process. Without contextual information and the confidence to proceed, learners will fail to function independently during practice and old habits will quickly reestablish themselves. Kagarice explains how this issue impacts her process with dystonic players:

When you go to address those things [muscle malfunction] – yes, you’ve got to make [the student] realize the physical aspect...[show them] ‘this is how it works’ - you get them to feel that, [but]...they can’t keep it until they think, “I had this breakdown and it had nothing to do with playing the tuba, it had to do with other things, just panic about things.” Then, it’s like ok, great because I didn’t have to tell them that, did I? They got it because I went where it was safe first. (Kagarice)

Again, this supports a holistic view of learning. Progress does not emerge from the acquisition of information; rather, learning is a process of connecting intellectual understandings, positive emotions, and a feel for *doing* over time. From this perspective, the teacher must be equipped to gauge which of these capacities (intellectual, emotional, or physical) is in need of support at a given point in the process. Does the student need more information, more emotional support, or more time to practice the skill under guidance?

In Kagarice’s view, the ability to answer these questions is rooted in becoming acquainted with the student as an individual. Everyone learns at a different pace and has unique strengths. The teacher’s function is to tune into the mental and emotional state of the player to that she is equipped to guide them in a way that builds on what they already know and do well. Information is not dispensed; instead, the teacher makes connections

with existing skills and understandings, gradually constructing a comprehensive experience of thinking, feeling, and doing.

Without the perceptive ability to read the student's current level and needs, the teacher can inadvertently derail, distract, or misguide by presenting too much information too soon, treading on an emotionally raw area, or asking for a physical skill that is not yet developed. Kagarice explains this issue in terms of a holistic view of learning:

Even if it's a physical thing that happens, it's intellectual and emotional too, so the [methodology] has to address all those things. Now, at what level you go into each one of those areas – intellectual, emotional, and physical – and which balance, which one you start with, at what level you use each one...it's all based on safety...and [that's] an instinct...to know...having worked with a bunch of people – that they're not going to learn anything from you if they don't feel safe. Safe with you and safe with themselves and with the process. (Kagarice)

While the concepts Kagarice focuses on in lessons are relatively consistent across students, her application of them is dependent on the learning style and needs of the individual. All players must learn to blow, direct the air, and resonate, etc...but, each of these issues are also colored by intellectual, emotional, and physical facets that impact the learning process. For example, the student may intellectually understand an explanation of blowing, but long-standing physical habits may inhibit application of this idea, which in turn can result in a lack of confidence. In this case, explaining the idea again is unlikely to be as helpful as supporting the student emotionally through the process of change and providing a positive environment in which to practice the new skill.

Supporting Principle #1: Trust

Consistently, Kagarice's first instructional goal is to make a social connection and to initiate a positive and productive mentorship with the student. The descriptors that most frequently emerge on this topic are *trust* and *respect*. Specifically, students feel that they can trust Kagarice on a personal level to offer guidance on career planning or emotional issues, and they trust her professionally in that they believe in her knowledge and the pedagogy she employs. As a result of the personal attention Kagarice gives them, students also report feeling respected as an individual. As a secondary but related outcome, these social issues appear to generate feelings of self-efficacy for the learner. Because they trust Kagarice's process, students undertake what she asks them to do with confidence, and then learn to place trust in the positive results they experience. This in turn appears to boost motivation during times of frustration or confusion.

All students who were interviewed referred to the positive impact of Kagarice's guidance in both their personal and musical lives. Marc describes how a constructive social dynamic is important to him:

If you're not really truly comfortable with someone - an instructor - then it would be really tricky to get into those nitty-gritty feelings that you can't really tap into without that sort of comfort level. I think the friendliness - you really feel you're working with, not necessarily a superior, but a peer who happens to know a lot more than you. And I really enjoy that, because I think that as much time as you spend with a music instructor, you really need to have that. (Marc)

Primarily, rapport grows out of the tone and subject matter of the ongoing discussions between the student and teacher, and is nurtured by Kagarice's continual interest in her students' wellbeing. She has a very outgoing personality and is easily

friendly with people, so she quickly forges and maintains meaningful connections with her students. Paul discusses how these aspects of Kagarice's personality allowed him to develop a feeling of trust for her very quickly:

From probably half way through my first semester here, I felt strongly that I could trust her. I'm not really sure [why], it's just Jan as a person – there's something about her. She also shares a lot about herself which makes it easy for you to give back, and see how you can tell her something and it's going to stay with her - she's not going to talk about it to anyone else. (Paul)

This quote alludes to an open and equal exchange of information which is ongoing in the lesson context. As Paul says, she “shares a lot,” and he “give[s] back.” In other words, not only does Kagarice “instruct,” or impart information, but she also listens to and validates the student's concerns, thoughts, experiences, and emotions. Goals are articulated collaboratively, through an open dialogue and exchange of ideas. Greg describes the process this way:

That's a really important thing Jan does, that even though we are young and we definitely have less knowledge and experience than the professors do, we are still not dumb. We have opinions, and even though we are still in the process of learning, we might still have good ideas, and things that we do well, and it's nice to have that acknowledged. She just really respects people and works at understanding who people are as individuals. (Greg)

Kagarice also feels that establishing an open and cooperative rapport based on good communication helps her to deliver content effectively throughout the learning process. Because her approach to the physiological aspects of brass playing is fairly unique in comparison to many of the existing practices in the field, she generally has to spend a significant amount of time conveying information, or lecturing. If a productive student-teach dialogue is established from the outset, the student is much more open to listening. Kagarice explains it this way:

I want to engage them to be involved...I need to dump a lot of information at them, so we establish a conversation, and then I am just monopolizing the conversation, which is why it doesn't feel like a lecture. It's a lecture, but I've confused it. I want it to feel like a conversation, and when they get engaged, then we're really ready to begin because now their brain is engaged in the moment.

This aspect of rapport is possible because Kagarice situates herself *next to* the student (which she refers to as "coaching"), and teams up with them to facilitate improvement collaboratively. She does not elevate herself above her students through status or assert her presence as an authority figure; rather, she encourages an ongoing dialogue in which the student is free to voice concerns and ask questions about what they are doing.

Because she is able to express this kind of respect for the student as an individual, they feel comfortable depending on her for emotional support. Students feel that Kagarice cares for them on a personal level and that she is concerned for their well-being. Her attitude in this area is cited as being very helpful to the learning process in that students feel they are better equipped to manage negative feelings, such as low self-confidence, and focus on the task at hand. Lisa explains how she was able to overcome personal obstacles and to begin thinking artistically about her playing:

Some problems I have always dealt with are just some self-confidence issues with my own playing...I feel like I have always had these ideas of things I wanted to do on the horn that were in my head, but I always had a really difficult time getting them out. Working with Jan, I've been able to [get] rid of this interference with my playing. I feel like my true voice is starting to come out on the trombone. I feel a lot more confidence. I feel that there's a lot I want to give to people....and Jan's been really helpful with me personally. (Lisa)

Because Kagarice views music-learning as a balance of mental, emotional, and physical capacities, she feels it is a priority to devote significant time to counseling

students with personal issues when needed. Paul explains how this lesson environment helped him to stay focused in school despite some difficult emotional issues:

This semester is probably a great example...because for the first four lessons, I think, all we did was talk, because you know...stuff going on at home. I've had family problems. So, she helps me work through that a lot because it transfers into my playing, and...work ethic – in rehearsal. So, those talks have really gotten me going back on the right track. Kept me from veering off. (Paul)

Like Paul, Lisa has had occasion to depend on Kagarice's support during times of difficulty. As she describes, Kagarice appears adept at reading body language and picking up on social cues, which she uses to diagnose the student's emotional state.

If I am having an issue, she'll ask me if everything's alright. There was one week in particular last semester when I was getting very little sleep. And I came to my lesson and she immediately knew because I wasn't being all crazy and obnoxious like I normally am, and she could see it...I was like, "Yeah, I haven't been getting a lot of sleep," and she said "ok, well we'll just take a break. Let's go get some coffee or something like that and let's just relax." Basically, she just tries to really understand what's going on with me, not just as a trombone player, but as a person. And, it's really nice. (Lisa)

Marc explains Kagarice's mentorship in this area from a more generalized perspective, but asserts that it is an important aspect of the instructional process:

You spend a lot of time sort of getting in touch with the emotional side. It's sort of like being in a psychiatrist's office, but holding a trombone while you do it! And, I think that you couldn't really have one without the other. (Marc)

Greg also recounts instances where he felt emotionally supported by Kagarice:

She's easy to talk to because as long as you maintain a certain level of respect, she's not going to bite your head off about something, and if you tell her something that you don't want other people to hear, she won't tell anybody, she's good at that. She's very non-judgmental, overall, just easy to trust. It's been helpful. Every so often, something will crop up...something bad will happen during the week, or I'll feel overwhelmed, and I just need to

vent about that a little bit and she'll understand that - sometimes people just need to vent...or sometimes they need more guidance or advise, and she understands that. Sometimes you just kind of feel lost and need an assisting voice. (Greg)

While Kagarice's rapport with her students is generally very close, she is also careful to maintain a level of professional respect, which she describes as "keeping a wall up to protect" the individual. Too much personal sharing can cause people to feel threatened and vulnerable, so the teacher must be equipped to pick up social clues, define appropriate boundaries, and proceed respectfully. At the same time, the teacher must realize what they are equipped to handle in terms of emotional issues. In a handout titled "UNT Trombone Pedagogy: Roles of the Teacher," (Appendix G) Kagarice explains it this way:

Keep the emotional well being of our students as a priority. Guide them to become more well rounded adjusted human beings while knowing your limitations and boundaries. Lessons should never become therapy sessions. You are neither trained nor licensed to do this. If you ever sense that the student is in danger of hurting themselves or others, you have a legal as well as moral obligation to be sure that they get the professional help that they need.

In addition, the student must learn to function autonomously, rather than build a dependence on the teacher's support, so it is important to balance mentorship with experiences that empower the individual and boost confidence. Kagarice views this as a priority, and explains her reasoning this way:

I've learned so much from the mistakes I made with [a former client]...he felt so safe with me, but then after being here, he said, "I felt like it was leaving my mom!" ...You want them to trust you, but in the end they have to trust themselves. They have to trust the methodology, and they have to be able to break it down - to discuss it with other people. (Kagarice)

At the same time, students trust Kagarice's mentorship on a professional level and depend on her advice to help bring their future plans into focus. All students interviewed reported that she had been particularly helpful with career-related issues. The student-teacher dialogue on this topic begins with the "goals meeting" that takes place at the start of each semester (see "Structural principle #1"). Once the student's interests and ambitions are articulated and collaboratively discussed, they become overarching themes within the context of lessons. Kagarice continually draws connections between new learning and what each student desires to accomplish in the long term. Students appreciate that instruction is individualized in this way. As Greg states, "she tailors your lessons depending on what path you are on." Kagarice's mentorship in this area is so consistent that Marc, a doctoral student with significant professional experience, explains her enthusiasm in a humorous tone:

I'm at a point in my career where I am exploring a number of possibilities for work. And, I have been trying to pursue all of them equally to see which one will fit first. And, she has been really great in nurturing that. Anything that I say, well... "I'm thinking of being a professional garbage man!" and she knows four people that I can go talk right now about being a professional garbage man [laughing]! And, if she doesn't know them, then Vern knows them for sure! It's not a joke! If you want to do it, it's do it all the way! [Laughing]

In this respect, Kagarice consistently places a high priority on the individual goals and learning needs of her students. In Marc's case, after several years of studying with her, she suggested that he move to another teacher within the school. In this instance, Kagarice was capable of setting her own ego aside for the benefit of the student. Marc was initially shocked by the suggestion, but later realized that it was a very good move for him. As he explains, studying with Kagarice was a way of "reworking wiring,"

whereas his new teacher is an opportunity to practice his new skills. When asked why he had switched teachers, Marc explained:

Kagarice suggested it actually! Now that I think about it, when she made that suggestion, I was a little bit taken aback. I thought we were making good progress! It's sort of like a break up at that point! Did I do something wrong? But now that I think about it, it's a great move because studying with Kagarice is like reworking wiring, and now you need to put it through it's paces. And, [my new teacher]...doesn't occupy a lot of lesson time with worrying about how to do something...just do it. You already know it. Just do it. (Marc)

Kagarice also encourages students to assert their individuality through the group dynamic she fosters within the studio community. She encourages all studio members to observe each other's lessons, so students often see the challenges and struggles of their peers. Kagarice is very open with the group about what each person does well and where they need improvement. If one student is particularly good at a specific technique, she/he may be asked to help someone who is not. In essence, players become the "expert" in whatever area they happen to excel. This helps them to form a strong personal identity which both accepts their weaknesses and capitalizes on their strengths, meaning they are respected for their individual contributions. Kagarice explains her rationale for nurturing this group dynamic:

You're not going to be all things to all people, and you're not going to be everything even to one student. You have to have their help to help each other out...and when you do that – you think [advanced players] don't struggle with anything because you hear them in a performance and it's like 'oh my god!' But, everyone in my studio knows that I don't like Josh's resonance yet, and everyone knows that Greg went through focal dystonia, and I charged them to help me...your job. Knowing this makes [students] not so afraid of their own weaknesses. (Kagarice)

Specifically, students feel that they are a member of a cooperative team effort aimed at shared improvement and progress. They realize that everyone, even the highest

of achievers, has to work hard in order to improve. Aaron explains the group dynamic this way:

The coach and all of her students – we’re all collectively heading in the same direction...we all have the same basic goal. And so I think if more of her students are in the room with me it is kind of like – I am part of the collective lesson. We apply the same concepts. This [idea] worked well for me so let’s try it on so-and-so, and then it becomes a thing and she develops her methodology. I’m just one small piece of the puzzle, so if more pieces of the puzzle are there, that’s fine. We’ll get a more global view on how to do it. (Aaron)

Supporting Principle #2: Trust

Kagarice asserts that it is a primary responsibility of the teacher to build an environment in which learning is safe, meaning the studio atmosphere empowers the student to proceed into change without fear. She states, “the learning doesn’t matter if they don’t feel safe.” The first step is to make social connections so that the student feels recognized and accepted. Once established, Kagarice uses this rapport to gather information about the student’s abilities and learning style so that instruction is match a match for their needs. Over time, this grows into an ongoing mentorship which in turn makes student-teacher interactions more rich, authentic, and meaningful.

Specifically, the goal is to pace instruction so that the student is presented with challenges that they are equipped to successfully achieve. The acquisition of new skills involves change, and this can be jarring, or even undermining, to the learning process. In order to ensure that progress is not stymied by negative affective states, it is the responsibility of the teacher to incrementally facilitate growth at a pace which allows the student to experience many small successes (rather than one or more big setbacks or

failures). This mitigates the uncertainty of learning and allows the student to experience feelings of self-efficacy and confidence. Kagarice summarizes the idea this way:

You have to make sure that it's safe. You have to make sure that they do it and they're successful. It's ensuring success. You have to ensure success. Or...then, there's a fear that's involved. (Kagarice)

The short-hand Kagarice uses for this concept is “making a match,” a phrase which is derived from Montessori methodology and refers to the idea that new information must be connected to existing skills and understandings if it is to be meaningful and lasting. She describes this as “respect for who you are and what you need,” in that the learning process is designed to build on what the student already knows, without destabilizing their confidence. Kagarice explains this concept using the analogy of what constitutes a friendship between two people:

[Friends] resonate with each other – [they] understand each other – and it is because there are similarities. There are similarities, but [they] aren't the same. There's things that [they] both do that are different, but that's what makes it interesting. If it's all the same, then it's not interesting, but if it's too much different, then it doesn't resonate. If you tell students stuff they already know then what's the point? They already know that or they've already done that. (Kagarice)

In keeping with structural principle #4, *making a match* applies to all facets of performance (intellectual, emotional, and physical). Technique is not arrived at through the body alone; rather, it is a holistic process which incorporates understanding, feeling, and doing. Kagarice explains it this way:

The physical manifestation is the result of intellectual and emotional turmoil....when you go to address those things, you've got to make [the student] realize the physical aspect...this is how it works, you get them to feel that, [but]...they can't keep it until they think, “I had this [problem] and it had nothing to do with playing the tuba, it had to do with other things - just panic

about playing.” Then great because I didn’t have to tell them that, did I? They got it because I went where it was safe first. (Kagarice)

For this reason, instruction starts “where it is safe first,” then targets which ever capacity (mental, emotional, or physical) is not supporting the student’s ability to clearly express musical thoughts. Kagarice refers to this process as removing “interference” from the player, which she defines as “any thought that is not about the communication of the concept,” meaning any intellectual, emotional, or physical impediment to the realization of the musical concept. Playing problems are only visible at the physical level, but they have their roots in thinking and feeling; therefore, technical issues must be addressed and corrected intellectually and/or emotionally, depending on the needs of the individual. This is not accomplished all at once; rather, the process is predicated on helping the student to feel safe through the uncertainty of change. This is based on a strong rapport, as Kagarice explains:

If you enter into a conversation with [the student] - no matter what it’s about - you...start to know them - you know their type of conversation, their patterning, where their brain is...[the point is] getting rid of the interference, intellectual, emotional, and physical, and if it’s emotional, you really have to slow down because there’s other stuff going on and the safety is really important. You have to keep redirecting so they feel safer and safer and not so self-conscious. And then, I go at it from intellectual and emotional, and the physical is just a manifestation of that, so I am going to redirect what they are thinking or feeling. (Kagarice)

The challenge for the teacher is to accurately diagnose where “it is safe” in order to locate a starting point. Kagarice conceptualizes this in terms of finding a place of agreement, meaning an assertion or idea which does not threaten the other habits of mind held by the player. In addition to direct communication, Kagarice looks for subtle social cues, such as a slight head nod, in order to determine how the student is responding emotionally to the content of the discussion. When she finds a point of agreement,

meaning the student has *made a match* with what they already believe to be true, she moves forward by building small, incremental connections that lead the player towards productivity, efficiency, and health.

In the early stages of instruction, this type of connection is, by necessity, sometimes very broad. For example, Kagarice will begin at the most basic level of musical expression in order to find and make a positive affective and cognitive connection.

Let's just assume that people playing music are trying to communicate to other people. Let's just assume that. So, let's assume that it's supposed to be an art, that through sound...we are communicating thoughts and ideas. They have an affect; they have feeling; they have phrasing. Thoughts about humanity, from humanity, to humanity. So, we are communicating through sound; our action is sound.

This perspective is relatively simple, which means it is also non-threatening for the learner. It is easy to find a point of agreement on this level. For example, with a student who has spent many years practicing breathing, it may not be possible in the initial stages to convince him/her that a focus of attention on blowing (see "Supporting principle #6") will yield greater efficiency; however, if that same player agrees that music is communicative, meaning it is a process of sending ideas *outward*, Kagarice can use that to form a link to the *outward* flow of air (as in blowing), which then takes the form of a medium through which the player can express ideas. Because the two concepts (communication and blowing) relate, Kagarice is able to facilitate learning in an area where the player would otherwise be prone to confusion or doubt.

From this perspective, it is the responsibility of the teacher to first establish a baseline for what the student already knows and is willing to accept, and then build on

existing ideas by presenting learning goals that are just beyond the student's current skill level or understanding. In order to accomplish this, Kagarice adheres to the Montessori adage "follow the child," meaning she closely observes the student's actions and reactions in order to get a feel for where they are in the process. The ability of the teacher to read the student in this way is rooted in positive rapport, and therefore improves over time, as that relationship develops.

Kagarice makes a distinction between this type of diagnostic observation and *empathy*, which she feels is not an objective means to gauge the student's needs. To *empathize* is to internalize an assumption about how another person may feel, which means that it is filtered through the teacher's own feelings. It is not objective. Instead, Kagarice emphasizes that observation must be external, or focused fully on the student. She explains it this way:

I think if you put yourself in their shoes, then it is too easy to have your own stuff in the way. What we have to do is pay attention to the other person, and we don't understand their experience, because they experience things differently. Yes, the best we can do is put it through our own lens, but...I think we all make that mistake. We assume other people are experiencing things the same way we do, and no one ever experiences things the way we do. It's actually drawing forth from them... where are you? (Kagarice)

As an example, Kagarice explains what she does when a student has a breakthrough, such as a technique suddenly falling in place correctly. Whereas teachers commonly assume that instruction in that area is now complete and so move on to another issue, Kagarice asserts that it is vital to continue observing the student at this critical moment. She stays with the student as she/he continues to repeat the action in order to see how that individual responds to the experience, as she describes.

Teachers will stop here, when he got it, and they'll say ok, "go work on that," but that's not right, because you have to stay here with him...as well as having the experience of me staying with him through the process, I'm gonna learn about his body, how it functions, his brain, how it functions, his practicing, how that functions, all of that, by observing what happens now. If I let him go now, I miss a lot as the coach. (Kagarice)

In addition to the overarching pedagogical goals of this concept, Kagarice applies the idea of "making a match" to more practical considerations. She encourages students to set small, attainable goals, rather than leaping forward to a skill that is not feasible given what the player can already do. This allows students to continually experience small successes within their own practice time, which in turn generates increased feelings of confidence and self-efficacy. Josh, a doctoral performance major, describes how this helped his ability to stay focused and positive:

Your goal has to match your skill level. You increase your goal as your skill level increases...You have a goal that is just above where you are, so you can complete that goal. And, you can continue to raise that until you've reached whatever your final goal is...She stresses that a lot. I told her about how there was more stress in my lessons previously than there is now, and she said that's because your goal is now focused to your skill level, whereas I had really high goals and was frustrated because it wouldn't be there right away. And now, it's just - I am keeping them closer together. (Josh)

Picking up on Kagarice's comparisons with swimming, Greg, a sophomore performance major, describes his understanding of this process:

She has the analogy [that] if you want to get a really good 200 yard sidestroke or something, you do 25 at a time until you get really fluent at 25 at a time and that's peak efficiency. You stop, you rest, and you do it again. You stop, you rest, you do it again. So, you do couple of bars at a time, but just do that until it's peak efficiency and it just happens without you even thinking about it and then you do that enough times and it just kind of globalizes to the rest of the music. Then it gets easier and easier to do bigger and bigger stretches of music. (Greg)

This explanation appears to derive directly from Kagarice's perspectives in that she describes the concept of small, attainable goals using very similar terms:

So, even if I can't do 100 yards butterfly, I can probably do 5 yards, and then 6 yards...you know what I mean? So, get the beginning of it and then just start, and keep moving it down. Don't be afraid of where...you lose something, just keeping going right up to that point. (Kagarice)

This idea is also superimposed over a more global view of Kagarice's method. From a generalized perspective, her approach is very structured in that she seeks to impart a number of specific and targeted mindsets, physical habits, and emotional states to her students. The strategy of *making a match* prevents the process from becoming overbearing or overwhelming for the player because it allows learning to be gradual. In the beginning, she does not ask the student to accept or trust all aspects of her pedagogy; instead, she incrementally builds the cognitive understandings, emotional experience, and physical practice that, over time, trains the player to perform without interference.

Supporting Principle #3: Focus of Attention

Growing out of her experiences as a Montessorian, Kagarice views one of the most persistent goals of the teacher as guiding the student's focus of attention so that learning can take place. Clearly, the ability to pay attention to the activity at hand is a desirable trait in any educational environment; however, Kagarice views this as particularly fundamental in that all subsequent stages of learning are dependent upon the ability of the student to repeat targeted actions or behaviors while maintaining a focus of attention on productive goals.

Kagarice approaches *focus of attention* from two primary fronts. First, under the guidance of the teacher, the student practices directing and redirecting consciousness toward a target mindset until that level of focus becomes a habit. Kagarice explains it this way:

There's a decision...on where we are focusing our attention. We can be mindful. We **can** [emphasis from the speaker] be mindful. We can learn that - where our attention goes. It's easy to just kind of mindlessly do it, but that's not helpful. That's what the guide portion is, to guide someone's attention. (Kagarice)

Secondly, Kagarice emphasizes the expressive, creative aspects of the music-making process so that mindfulness is intrinsic to the experience. If the learner possesses enthusiasm for what they are doing, it is much easier to engage authentically. This is directly related to the communicative nature of music, in that the essential nature of the artistic temperament is to develop a heightened awareness of experiences. In this state, we become equipped to notice and absorb more about what is happening. Kagarice explains it this way:

It's really about learning how to look. To not just look, but to see - and not just to listen but to hear. It is the basis of all learning...it doesn't matter if the teacher has the answer if that person doesn't get it. Guiding someone's focus of attention where you want it - that's a whole different thing. (Kagarice)

As the player develops creatively, this type of engagement with the musical process expands as mental acuity is refined. As the student becomes more aware, they gain insights about what they know, understand, and do well and so become equipped to build on their own skills. From this perspective, Kagarice views virtually all technical issues as "focus of attention issues," meaning that skills are built when we pay attention to the goals which require them. If a skill is lagging, our focus of attention is misplaced.

For example, ear training develops through consistently focusing attention on sound. Over time, the individual begins to notice the nuances of pitch, expression, and pacing which form the musical language. Kagarice states, “you may have great ears, but if you aren’t listening, it won’t matter.” If the student struggles with understanding aural information, Kagarice’s primary strategy is to create situations in which the student can experience highly expressive or nuanced sounds, while drawing their attention to particular details; she guides them to the information, rather than imparts it.

For this reason, Kagarice describes the role of the teacher as one of guide or facilitator in that the goal is not to dispense information, but to present opportunities for the student to authentically engage with the environment. Over time, this connection sparks curiosity and facilitates a mental stance that motivates students to explore, discover, and construct meaningful associations. Kagarice explains this idea in terms of an artistic perspective:

You’re job is as a guide. When they come in you are trying to get a lot done in a short amount of time, and you want to explore the whole forest of literature, but you want them to see everything along the way...to explore on their own...so that person can make their own connections. [Then] they get it! So, not just to look, but to really see. You’re focusing their attention in each lesson. (Kagarice)

This philosophical stance appears to have facilitated successful results in students, as they report an increased ability to focus productively both during practice time and in performances. The side-effect of this process is also increased motivation. Greg asserts that practices more productively, and for longer periods of time. He states, “If you really enjoy something, you don’t mind doing it over and over. If something is benefiting you, you don’t mind doing it.” He explains how his experiences have evolved:

What I've found though is I've started to need to set an alarm when I'm practicing, because you lose track of how time is going, and a few times I've shown up late to class, or shown up late for some other appointment because I just didn't really realize time was passing that quickly. It's kind of like you play a passage 10 times in a row, and this passage is 1 minute, so that's 10 minutes, and you don't realize it – like the number of repetitions don't seem to impact you, it just sort of rolls. (Greg)

What is notable about this quotation is that Greg reports the sensation of losing track of time, which is one of the key indicators of Csikszentmihalyi's (1996) condition of optimal experience, or *flow* (See "Music as the focus of attention"). Although the scope of this project is not sufficient to meaningfully or accurately map the role that flow plays in this context, it is worth reviewing because the participants in this study characterize their own experiences in this way. In addition, it is the language which they use to describe an ideal in terms of mental focus, which is one of Kagarice's primary learning goals.

Greg also describes experiences during which he experienced an authentic connection with the act of music-making, and therefore felt a sense of self-efficacy. He characterizes the experience as getting into a "zone."

You always hear athletes talking about getting into that zone where everything just works. Like the spider sense thing [laughing] where time changes...and it's just a different state of mind...where everything just kind of works. Time doesn't feel like it's going by. It's like you're in this encapsulated time bubble where nothing else in the universe exists other than this moment with this instrument and this music... a floating continuity bubble and...nothing else can get in. It's just this moment...some concerts I've had, I really don't remember at all. I just kind of remember it going very well. (Greg)

While all students describe the "zone" as a highly desirable state and recount moments when they were able to achieve it, some report that the state is sporadic or unpredictable, implying that there is a learning curve in place in terms of developing this

skill. Further, this level of ideal focus is not calculable or quantifiable; rather, it immerses from the process when the player learns to let go of negative emotions and to be mindful of the music-making experience. Lisa explains it this way:

At the trombone showcase earlier this semester...I played the Halsey Stevens...I tend to get really hyped up and really nervous, but then I got on stage, and it was like, ok - I know what I am doing in this zone...in that performance in particular, it was almost immediate. It's kind of difficult to put into words for me. Basically, I just stop being careful. I just take a chance the whole time instead of playing it careful or playing it safe. Normally, you want to not mess up, so you would be testing the water a little bit, so instead I'm just diving in face first. (Lisa)

Greg also describes this state as being an ideal, and points to the holistic nature of the experience. In order to get into the "zone," he feels that emotional, physical, and intellectual interference have to be removed, or released by the player. When the mind and body are not distracted, the individual can focus on the task at hand in way that produces optimal experience. Greg describes this as a form of "fluency," in that the player's skill level is developed to the point that she/he does not have to devote mental energy to thinking about *how to do* things; rather, motor skills respond naturally to musical ideas. He explains it this way:

I think it's just been a process of getting rid of extraneous physical motion, and getting rid of, or replacing, bad habits with better habits...Now that I kind of understand better how the brain works and how to apply that to music, I kind of know what to expect, I kind of know what the feeling is going to be like going into it...I'm not thinking about how to move the slide...everything just sort of jells. When there's less physical and mental cognitive – in a sense...when there's less stuff clashing around you that you have to fight, it just sort of becomes easy...Some days it's a little harder, like if I've had a bad day or I'm tired, or if I am not in the best health...but sometimes, you can block out even that...it just sort of happens on its own. I just start practicing and it happens. (Greg)

Other students reflect Greg's concept of *fluency*, and describe developing a "feel" for what they are doing. Paul explains it this way:

There's also that feel. Part of the zone for me is that feel of the blow...There's a feeling to it, and when you get it, it feels great and you know exactly what it is. But, sometimes, it's hard to get back...that's the repetition is part of it, because as you are learning this new process - the repetition of getting into that zone [and] eventually it will become second nature...you're not thinking "blowing and singing," it's just happening. (Paul)

Supporting Principle #4: Form Follows Function

Form follows function is the practical application of Kagarice's *why/what/how* concept. Successful and efficient performance on a brass instrument requires the synthesis of many complex muscles movements. This is the *form* – the motor skills required for performance. *Function* is the purpose for taking action – *why*. Initially, the basic function in brass playing is *blowing*, or sending *air* outward, which then evolves into the more broad function of *communicating* rich and detailed musical thoughts, or sending *ideas* outward. Kagarice teaches technique by directing the student's focus of attention to *function* while actively *doing*. *Form* develops within the individual through a process of repetition, trial and error.

Kagarice asserts that instruction interferes with the learning process when the teacher attempts to explain what good form *looks like*. She summarizes this as a "description of symptoms, rather than a prescription for doing." When the learner is told where, when, or how to manipulate their muscles, the brain is distracted from *function* – the goal – and the natural motor skill acquisition process of the brain-body is disrupted. Under conscious direction, muscles are clumsy, slow, and/or inaccurate.

Given this, the role of the teacher is not to instruct in *how* to do, but to guide the student into a state of mindfulness about what they are trying to accomplish in order to facilitate an efficient process of repetition, trial and error which will build the physical skills needed to reach that goal. Kagarice asserts that performance problems derive from a misunderstanding of where players should direct their focus of attention. Because the *function* of brass playing is to move air, the student must learn to expertly manipulate the flow, quantity, and speed associated with the action of blowing.

Specifically, Kagarice's approach makes a distinction between learning *about* something and learning *how to do* something. *Form* -- the physical movements required to execute an action -- is observable in master performers; however, it cannot be directly transferred to a student through physical instructions. Kagarice frequently explains this concept using the analogy of swimming, a sport in which she has extensive personal experience. She believes in this analogy so strongly that she will sometimes take students to a pool in order to teach them how to swim using the *form follows function* concept. While this is clearly an unconventional approach to music teaching, her students appear to appreciate the experience and find it helpful. When asked to explain the concept *form follows function*, senior performance major Aaron responded:

I first heard that in swim lessons, actually, and in that setting it made a lot of sense. It was a very tangible way to understand the concept. For someone who has never really been a swimmer, it was pretty awesome -- that made a lot of sense. I wasn't aware of the form, and didn't have years of training on how to do it exactly, but Kagarice was able to put it in a way that really made it easy to understand and really made me enjoy it for the first time ever... And in terms of trombone, it's the same thing. It's kind of a hierarchy of priorities. If you do this everything else will follow. This is the most important thing to do -- you know hearing things and just blowing air, not doing anything - and things kind of naturally evolve from there. You fix one thing and everything else gets fixed as well. (Aaron)

Although swimming and brass playing are not directly related, they share commonalities in terms of motor function which Kagarice uses to solidify her students' understanding of what they are doing on their instrument. In swimming, the function is to *move water*. In brass playing, it is to *move air*. By becoming mindful of this goal and practicing through repetition, trial and error, the brain “maps” the motor skills required and an efficient *form* evolves out of the process. Kagarice explains this using the swimming analogy:

In swimming – you see Michael Phelps [an Olympic swimmer] swim and so you think...it looks like he's doing an s-curve [with his hand] under the water. You can teach someone to do an s-curve, but that's...a symptom of what Michael Phelps is doing...[what he's actually doing] is moving water behind him while creating the least amount of resistance...So, you're feeling for still water...you might do an s-curve, you might do a v-curve, you might do a bunch of different things, but if you feel for still water, you've got it. The action is feeling for still water. You can describe the symptom of it, and it's not the same thing at all. (Kagarice)

In other words, a novice can move their arms in a way that *looks* exactly like an advanced swimmer, but this will not result in mastery, no matter how many times the actions are repeated. What we can *see*, or the *symptoms* of good form, is the byproduct of the individual becoming attuned to an awareness of *function* while physically balancing the resistance of the medium that is being acted upon. Motor skills emerge over time, as experience is gained, repeated, and refined. Any instructional strategies which direct the student to consciously control or manage specific muscle movements distract from the ability of the learner to productively focus their attention on function, or the *action*. In terms of the relevant literature, this is closely related to the *automatic* learning mode (See “Motor learning: Making a match”) outlined by Verdolini (2000).

Kagarice asserts that *form follows function* is how the body learns best. All actions, or motor skills, are connected to a *reaction*. In order to move efficiently, the brain must focus on the desired action, so that the body can initiate the appropriate reaction. The configuration of muscles used in the face while playing a brass instrument, commonly referred to as the embouchure, is a *reaction* (form) to the *action* (function) of *blowing* air. For this reason, the teacher must know what the *action* of playing is and consistently direct the student's focus of attention there. When the process is not approached in this way, the body goes out of balance in one way or another. For example, Kagarice explains why it is important to teach blowing (the action) instead of breathing (the reaction):

A quick breath [in] is a fear-based reflex – you're born with it. When someone scares you, you go like this [gasps]. So, you teach someone to do that [when they play] and you're setting up fear-based playing. We are born with certain reflexes...some of them we grow out of, some of them we don't. We never lose that [gasp reflex]. When someone jumps out at you, it scares you and you go [gasp]. So, when you [breathe] purposefully, in the brain, you are connecting playing with that fear. It causes your brain concern – it is fear based reflex. People think [breathing in] is relaxing – it isn't. This is relaxing [blowing out]. That's a release - that's a reflex too - it's a sigh, a release of tension. So, why not to teach breathing? It's not the action. The action in playing is to move air down the horn, that's all we do. So, when you teach the breath, it's teaching the reaction – wasted effort.

Primarily, this is a focus of attention issue in that teaching the *reaction* distracts the player from the principle directive, or *action*. It confuses the body by sending conflicting information, and it takes up cognitive space which then cannot be used to concentrate on the actual goal. Sound occurs during the exhale, but if the player focuses all of their energy on taking a large breath in, blowing becomes a reaction, or the passive phase of the process. This desensitizes the player to what is actually happening during tone production. In terms of respiration, this also has the undesirable effect of generating

less kinetic air, meaning the player has less air to use because the body is focused on taking air in. Kagarice explains it this way:

When you teach the reaction, you're not only causing unnecessary tension, but also confusion in the body. It thinks this [breathing in] is what you want, so it will give that to you, because it thinks this is the action that you want. Now, the problem is that the brain can only think of one thing at a time - background of attention and foreground of attention. So, when you are getting ready to play and you think, 'ok, I am going to take this kind of breath' and you take a breath....but, your body didn't know why you were taking that breath...so it didn't know you wanted to use it. We use the air for other things, like to keep the body alive, so it starts storing the air because it thinks you don't have enough air, and starts using it for muscle function, brain function - so it's already in the process of trying to store that air. And [the air] doesn't want to come right back out because it is way in the back room and it comes out weaker because a body in motion tends to stay in motion. What did you tell the body? (Kagarice)

Kagarice asserts that “telling the body ‘how’ interferes and the body doesn’t find the balance.” In other words, if the player continues to send specific directions to the muscles, i.e. if the brain is still actively “setting” the embouchure, the brain-body will be confused by conflicting information and will fail to achieve synchronicity. Further, learning through doing avoids excess muscle tension in that it builds “useful strength” which is directly related the motor skills associated with playing.

Like all aspects of her teaching philosophy, Kagarice explains form follows function in detail during the initial states of instruction. Her students appear to have adopted very clear but simply stated understandings of this concept:

There's the physics – the air goes this way [indicating down the tube] - it pulls the lips together. It reaches the resistance of the horn and makes the lips vibrate. That's it. (Joseph)

All that you do is just blow and hear what you want, and everything takes care of itself. (Paul)

Hear what you want to happen and let it happen, instead of making it happen. (Lisa)

Your air just starts to move on its own. You don't have to think about it. You don't have to think about taking air in, or forming your embouchure, it just happens the clearer your goal is. (Greg)

Supporting Principle #5: Balance and Resonance

At the most basic level, *form follows function* is related to the conceptual nature of *Song and Wind* (See “Conceptual” techniques in brass pedagogy); however, unlike Arnold Jacobs, Kagarice includes a sensory-based component aimed at connecting the player's mental image of sound and the motor skills required to operate the instrument. This aspect of her approach is unique within the field; no other teachers have published methods which match her ideas in this area. It is important to note that although her approach addresses the physical aspects of performance, it is not prescriptive; she does not teach any physiological directives aimed at inducing specific movements. Kagarice explains her reasons for avoiding this type of approach:

If you tell someone a description of the symptoms – “you have to do it this way.” Well - yes, I can talk this way [tightens face], but it's unnecessary. It's extra effort, and it's a different signal to the musculature that you have to do it “this way.” And you can do it for quite awhile if you have enough strength, but it's inefficient. Plus, the signal [from the brain] going to that area may potentially trigger protagonist/antagonist muscles which are supposed to be working in coordination with each other, and they don't. They are on at the same time, and what you get is muscle spasm or shake...That's an instruction I don't need to have. That's a description of symptoms, not a prescription for doing.

Specifically, Kagarice teaches *form follows function* through the concept of a “balance point,” which she defines as a point of contact where the energy supplied by a movement is exchanged with the (usually static or opposing) energy of the medium being

affected by the action. She asserts that this phenomenon is fundamental to any motor skill, and that awareness of it is the key to unlocking efficient form in any movement-based activity. She defines the balance point this way:

It's an energy exchange. It's a feel - there's a feel in anything. I can feel when I'm picking this up [picks up a cup]...and that feel is going to be your balance point, because your focus of attention has to be where you are exchanging energy. (Kagarice)

For example, in the sport of tennis, the balance point occurs where the ball meets the racquet. Ideally, the process for developing form is learned through repetition, trial and error while cultivating a feel for balancing the athlete's movements with the opposing energy of the ball; therefore, the focus of attention is always on the contact point. This is a form of *sensory awareness* because it is experienced in the "feel" (i.e. changes in resistance) of the arm moving the racquet, but it is not a process which can be directly quantified or observed. Through proprioception, or the sensory awareness of where the body is in space, the brain "maps the tool," meaning it learns to use the racquet as an extension of the body.

Conversely, if the balance point is misaligned because the player is focused directly on form, such as executing the backswing itself, she/he loses awareness of the energy exchange and the resulting movements are less accurate and more physically tiring. Kagarice explains the analogy:

If the air is not doing the right thing and you've been taught that you have to "do," you have to buzz...the mouthpiece, the balance point is in a different place...not in the right place. So now, you're focusing on the back swing [using a tennis analogy] and your focus of attention is on this [the arm and body]...it doesn't function very well - it feels kind of stiff. So, your focus comes back into your body, and it keeps coming further and further back so your balance point is all screwed up. (Kagarice)

Similarly, the *balance point* in brass playing occurs at the *point of resistance* where the moving air supplied by the player is *resisted* by the inert air already present in the instrument. When the player blows into the mouthpiece, his/her air is moving at a high speed. When this column of air pushes against the stationary air within the horn, the changing pressures trigger a vibration in the tube. The location of this balance point is dependent upon the speed of the air supplied by the player. Faster air gets further down the tube before it is resisted, and results in a faster vibration, or a higher pitch. Slower air is resisted sooner, and results in a slower vibration, or a lower pitch. This concept reflects some of Don Jacoby's (See "Sensory" methods in brass pedagogy) ideas about air speed. Kagarice explains:

How do we play with the air? The air goes down and bumps into the still air that is in the horn, and it causes a friction. It also causes...suction. [The lips] come together - it's Bernoulli's Principle. You blow through your lips and the lips come together and vibrate. ¹

In order to explain this idea of "feeling the balance" in the instrument, Kagarice calls on an analogy with the sport of surfing. Like an athlete who finds equilibrium by becoming sensitized to the subtle changes of speed, direction, and flow of a moving wave, a brass player learns to balance the changing resistance of his/her air as it collides with the still air in the horn. The surfer is not paying attention to the *board*, but the water moving *under* the board. Likewise, the brass player is not paying attention to the embouchure or mouthpiece, but the feel of the *air inside* the horn. Kagarice's phrase for this is "surfing on air." This type of responsiveness is not dependent on real-time

¹ Bernoulli's Principle refers to the phenomenon whereby air velocity is correlated with air pressure. Air passing through a smaller passage will move at a higher rate and exhibit a lower pressure than air moving through a larger passage. In terms of wind instruments, the air supplied by the player produces suction which draws the reed or lip to a closed position and thereby initiates a vibration. (Fuks & Fadle, 2002)

conscious motor adjustments; rather, the focus of attention remains on the balance point and the body naturally, gracefully, and automatically learns to compensate. Kagarice also points to the ability of skiers to remain balanced while navigating moguls as an exemplar of this phenomenon. Paul, a third semester undergraduate, describes this concept:

Surfing on the air, you know there is a balance point and all you're doing is riding it, you know, surfing. And then balancing...the balance is part of that feel. ...there's a point where you can feel the resonance with the air, and that feel of balance - if you can keep that as the goal - that's the end result of that zone you can get into. You actually have to experience it...there is a feel to it. There is a feel to that balance point. Once you feel it and you keep that balance point, with repetition and then eventually...it becomes second nature and then you won't have to be thinking about it as much. (Paul)

Because there is a sensation of blowing *against* something within the horn, activating the balance point results in sensory feedback for the player. As the *amount* of resistance changes, i.e. as the player alters pitch, there are corresponding shifts within the feel of the air stream itself. By focusing on this phenomenon, the player can become sensitized to the changing air pressures which control pitch. In order to make this information useful, it must then be systematically linked with musical statements so that the body can map sensory and aural information and over time learn to navigate the instrument efficiently in all registers. The player *hears* the target pitch and *blows* it into place on the instrument, eventually merging these two capacities into a *feel*, or sensory memory. Once this is absorbed by the player, she/he no longer has to directly focus on finding the balance point. The process becomes automated. Kagarice explains:

[The lips] will vibrate in sympathy with what you hear. Just like every single thing the brain/body does, the body is trying to match exactly what the brain conceives. So, we make a sound by blowing air down the instrument, which creates suction. The lips vibrate and make a sound. The kind of sound

is dependent upon what your concept is. It's going to match the pitch you hear no matter what. (Kagarice)

When the player activates the balance point in this way, Kagarice characterizes the resulting sound as being in *resonance*. In this state, tone emanates from the entire instrument, rather than a localized point at the embouchure. Aurally, this is a subtle distinction which Kagarice describes in terms of where she hears the balance point. For players who are actively buzzing the lips using facial tension, the balance point will sound like it is high in the instrument, or further from the listener. Tone is covered and directional. Conversely, the balance point of players in resonance seems to vibrate from further down the tube, away from the player and toward the listener. In this case, tone is more projected and sonorous and seems to fill fully fill the space.

Resonance is highly desirable and is the primary physiological goal which Kagarice targets. Playing in this state yields a rich sound with the least amount of physical effort. Kagarice often refers to this as “efficiency,” which explains this way:

What am I doing... in the pool? I am moving the most amount of water behind me while creating the least resistance. That's efficiency. Efficiency is doing everything you need to do and nothing else. We [incorrectly] teach...a description of the symptoms of good playing...not a prescription for doing it.

Kagarice has also used William Cramer's (see “Sensory” methods in brass pedagogy) phrase “blow freely” to describe an ideal state of physical release that is conducive to generating resonance. The *action* of playing is moving air. When this happens, the player finds balance between the column of fast moving air and the opposing energy of the air in the instrument; therefore, it is not efficient for the body to stop the free flow of air, or as Kagarice describes it, to “hold back” the air, because the internal pressure of the instrument supplies resistance. If the player is not aware of this

and/or has been taught to “buzz” the lips by tensing the muscles of the face and forcing air through them, the embouchure itself becomes a point of resistance. In order to produce sound through it, the player has to use excess internal air pressure to make the lips vibrate. This creates what is referred to as *back pressure*, which causes excess tension, especially in the throat and face. Under these conditions, the player cannot sense the balance point because there is too much resistance internally. Kagarice explains it this way:

You’re not buzzing your mouth. If you play a great sound and you take the mouthpiece off while you are playing that sound, all you get is air. And so, how we actually play is we move air. When you blow air down the tube, and it bumps into that still air...energy is exchanged. It’s the balance point and it leads to resonance. The action in playing is to move air down the horn, that’s all we do. It’s way out in front. (Kagarice)

The phrase “way out front” is significant because it refers to the ability of the player keep the focus of attention on the balance point, which is in the instrument. Players who have been taught using a prescriptive embouchure formation method have spent the bulk of their education in a much more *inwardly-focused*, meaning their attention is on the muscles of the embouchure and face; their balance point is misaligned. In order to generate a sonorous tone and experience the sensory feedback it creates, the player must learn to shift their focus of attention outward.

This issue points to both intellectual and emotional components of resonance. In order for the process to work, the player must be equipped to focus attention on the balance point, rather than the musculature. Because this represents such a departure from what many people have been taught to do, it also requires a level of emotional commitment in order to maintain. The player must understand why they are making a

change and feel comfortable taking action to implement it. As Kagarice states, “physiology is not pedagogy.” Learning to balance with the instrument is a process which requires holistic participation from the student. It is not simply a list of physical skills which can be isolated and drilled; rather, the player focuses on the outward flow of air accessing the balance point, practices a communicative emotional state, and reinforces a mental image of exactly what they want to sound like. Over time, through repetition trial and error, efficient technique is developed.

Supplemental Principle #1: Expanding What Works/Positive Language

In a general sense, Kagarice’s personality tends to favor positivity. She will more readily choose to hone in on what *is* working, rather than point out what is not. When the student is dealing with some sort of technical, physical, or other playing issue, she will typically choose to frame feedback within the context of a positive directive.

Is there an intellectual, physical, or emotional impediment to getting...their best at that moment? They bring the goal... through that presentation of what they are playing, and then I think “what is the impediment that I am trying to help them move out of the way?” ...whether it is redirecting that impediment, or pointing to the things they are doing well and hoping that impediment diminishes. “This is really good, can you carry that all the way through?” versus “look at this over here, this is really a mess.” Because that can cause more of a mess. Instead, look up here, this is great! (Kagarice)

There are overarching implications for taking a positive approach; specifically, Kagarice feels that the intent behind performance (the *why*) must be healthy and balanced intellectually and emotionally if the body is to consistently respond efficiently. For this reason, she favors the perspective that each individual performer “has something to offer and nothing to prove,” meaning the actualization of the player’s unique expressive voice

is the primary goal of performance. Students are consistently directed to “tell them” during lessons, with “them” referring to an imagined audience. The point is to positively reinforce the student’s ability to impart original musical thoughts throughout the training process.

Conversely, perfectionism, or an unbalanced emphasis on accuracy and execution, generates rigid expectations and negative emotional experiences. Based on Kagarice’s view of the integration of intellectual, emotional, and physical aspects of performance, misplaced performance goals such as these have negative ramifications for the entire tone production mechanism. Specifically, the student is put into a “reactive” mode, meaning they are constantly trying to mitigate errors and “checking” in on their physical status, instead of expressing and communicating. These mindsets lead to excess tension, rigid physical states, and potentially injuries or dystonic reactions. Kagarice summarizes this issue with the following assertion:

If you don't like anything you play, your body hears you! Acknowledging what is better tells your body that it is going in the right direction – this is not lowering your standards! (Kagarice)

For these reasons, if a student makes a playing error that isn’t the result of a lack of knowledge or understanding, Kagarice rarely addresses it directly; instead, she calls quick attention to musical concerns and engages the student’s creativity as a means to overcome the obstacle. This is linked to a holistic view of motor learning. If the mind is focused on what is *not* working, the body will be more likely to produce that outcome, even though it is not desirable; therefore, Kagarice links optimism and positive affective states to the efficient acquisition of motor function.

The ongoing practice of favoring strengths over weaknesses also serves to dilute the impact of mistakes and de-emphasize their negative impact. As a reflection of this, students tend not to criticize themselves harshly or adopt a self-defeating mindset; rather, many specifically cite their experiences with Kagarice as helping them to let go of perfectionism and negative self-criticism, which is described as very freeing emotionally. Paul describes his own experiences with this aspect of Kagarice's teaching.

She tends to be all positive. It's never really anything about what is wrong. That's something that I have to work with, because I am usually more... negative...if something is not right...I kind of get frustrated. I want to fix it. With her, it's just keep going - that didn't go great, but ok, take that and strive and keep going. So, for me...it's better in the end because I need to get away from that. It's not like she hears something awful and then shrugs it off. It's just that it's not a negative way to look at it. (Paul)

Over time, the students fully adopt this level of positivity, it appears to empower them to take risks and envision the completion of their goals. The experience of one student in particular exemplifies this effect. During my first site visit in September, she was struggling with issues regarding basic tone production and was having notable difficulties with accuracy. Her sound was also suffering from a distracting double buzz in the embouchure. In November, just two months later, she won a concerto competition playing a major piece from the repertoire which she had only begun working on in October. When I saw her in the spring, she had undergone an incredible transformation. Both her accuracy and artistry were remarkable. Despite the notable improvements in physical skills she displayed over this time period, she describes the experience as largely an emotional transition:

I just worked at it phrase by phrase, just really trying to get to know the piece really well – just studying it. Instead of thinking, “ok, I gotta get all the notes,” or stuff like that...I was thinking, “if I were a vocalist and this was an

aria, how would I sing it?” Trying to think of it that way. Instead of playing the trombone, I was singing. It wasn’t so much happening for me early last semester, because I was still in that really hyper, perfectionist, obsessive compulsive place, but now I’ve really been starting to get into more of a groove with it...I think because again, I am starting to forget about worrying about little technical or mechanical things, instead I am thinking, “ok, how do I want this to sound?” This is what I want it to sound like, so let’s just have it happen and if it doesn’t happen that way, let’s do it again, and OH! That sounded pretty good, and again...so basically, it kind of becomes a habit to happen that way. (Lisa)

This type of optimism is very common in Kagarice’s studio. Josh, a doctoral student, describes the process of practice and improvement in very simple, attainable terms:

Just give yourself goals that you can get! Start small on a day by day basis, and be happy with progress. Kagarice always says, “don’t make the better the enemy of the best.” Whenever I do something better...it’s not perfect – but, it’s getting better...the other day I was doing something and it just clicked, and she said “don’t judge it.” Just keep the focus on the music. (Josh)

Supplemental Principle #2: Technique is a Process, not a set of Skills

The final principle in Kagarice’s teaching philosophy is primarily derived from student feedback, although based on her behaviors, she appears to support the idea. All of the students interviewed for this study report that their experiences with previous teachers were markedly different than what they are doing with Kagarice. They are very aware that her methodology is unique and from that understanding, they express an important assertion; namely, that there is no single physiological approach to brass playing which will work equally well for all players, and that the acquisition of technique is a *process*, not a set of skills.

Marc, a doctoral student, describes the limitations of a “physiological approach” which seeks to impose specific muscular configurations on the student:

You worry about these mechanical things and if you do everything just right, the square peg fits in the square hole, but you also find out that an equal size round peg fits in that same square hole! Or, that a triangle fits in there too! [Laughing] And, you know you can even fit two triangles! You find all these different ways to go down this same path. Like I said, I think with the physiological approach, you’re pretty much stuck in a mechanical approach, where there’s really one solution - but the more you can open that up, by opening up the psychological avenues, you find out that there’s a lot more ways to accomplish what you are trying to do than just the one way. (Marc)

Nonetheless, Marc and all of his peers report that their previous experiences were characterized, to a greater or lesser degree, by physiological directives which became ingrained and habitual. For this reason, they frequently talk about a “transitional period,” in which the mind and body learn to release prescriptive thoughts, and focus on air and expression. This is described as a confusing period during which the rate of progress is sporadic. Marc explains it this way:

I had trouble with it. I still grapple with it because you know I played for fifteen years the other way, so for a period of about a year and a half, I was between systems. I was having a really hard time with it. It was extremely frustrating - you know I had done ok before. I mean I didn’t do anything great, but I was doing what I thought was pretty good, and then it - now if you do this, you’ll be even better - but at first, you have to be worse before you get better. (Marc)

Like Marc, Lisa experienced frustration and setbacks during this transitional period, but ultimately she moved past these challenges and emerged on the other side of then in a very positive way, as she explains:

Occasionally, I’ll get pain in my upper lip when my face wants to kind of creep back in and wants to take control again, or like if I’m just overall physically fatigued and I just have a hard time getting my air to move...then I’ll start to fall back on using my face, but I’m not used to doing that so much

anymore, and then my face will fatigue really fast...when [I would get] nervous, I would try to go back to the old way, but because I had been trying to work on the new way so much, my body was like – I'm not comfortable to do it the new way automatically, but then again I hadn't been doing it the old way and my body had kind of forgotten. (Lisa)

As Kagarice's students become acclimated to her approach, they often reflect on their previous approach to playing as having been characterized by excess tension and physical effort. The ability to let go of these limitations is described as being very freeing, and even as removing a significant amount of fear from both performance and practice. Lisa, a second semester performance student at the master's level, describes the experience this way:

Before I came here - my senior recital especially – the tension and physical conflict that was going on with me - I almost didn't make it through the end of the recital because it was so bad. In fact, I am pretty sure if I had kept playing the way...I'd be surprised if I'd still be able to play...right now... I'd gotten so fatigued at the end of my senior recital and the fall semester of my senior year, that I'd put the horn down. I didn't even touch it for a few weeks, just to relax, refresh, and then I'd pick the horn back up and trying to get back in shape and everything...my tone was really bad and it wasn't as free and open as I wanted it to, and my range was really limited. I was really having to force things to happen, and getting some really severe fatigue and pain in my upper lip. And, then it would get frustrating, because I would be like, "I gotta fix this, I gotta fix this!" It would just get worse and worse and worse. It was really getting very frustrating. It was kind of scary. (Lisa)

From this perspective, learning is a process which takes place within the individual, as she/he experiences successes and builds on them in a positive way. This generates the notion that technique cannot be taught, meaning the component skills required for mastery are not simply transferred from the teacher to the student; rather, the teacher presents accurate information, provides a context for application, and builds an atmosphere which allows for experimentation, as the student navigates their own experiences and builds a mental, physical, and emotional understanding conducive to

expressive and efficient performance. Kagarice summarizes this concept very simply: “Repetition, balance – the only way to get good at it is to repeat it enough so that the body gets it – no one can teach that.”

Her students appear to have absorbed this concept and tend to describe their own path to progress in similar terms. Joseph, a doctoral student who is already teaching at two universities and maintains a large private studio, appears to understand and apply this perspective in his own work:

Ultimately, you can't teach technique. You just can't. The student learns the technique – it's just like learning how to walk. You can't teach somebody to walk. Little kids see how to walk, and then they get up and start walking. (Joseph)

Despite the confidence of this assertion, Joseph also recognizes that his perspective diverges in some ways from the community at-large and that this can generate conflicts when working with other musicians. Interestingly, he is not troubled or frustrated by the presence of opposing view points; rather, he recognizes that, like his own process, he cannot simply dispense knowledge and expect someone else to understand it. Rather, he focuses on productively “redirecting” the conversation when working with colleagues, and asserts that it is important to maintain respect for the intellectual, physical, and emotional state of the person with whom he is interacting. He has adopted Kagarice's perceptive and applied it to his own work as a professional.

I just say what I say and I do what I do, if somebody doesn't like it, and I don't get called back, that's ok. I find that this [Kagarice's methodology] is not the typical approach used by everybody, but to a certain level, I maintain positive relationships with people who think in different ways, but at the same time I am not going to sacrifice what I believe, and so I just go ahead and do it. So, I don't dance around it as much. I redirect a lot. (Joseph)

Summary

Jan Kagarice's teaching is a dynamic and complex combination of thoughts and actions deriving from her strongly-rooted assertions and philosophies about musical expression, personal development, and the acquisition of motor skills. She is highly intelligent, experienced, and knowledgeable, and no aspect of her practice is undertaken without a clearly-defined goal in mind. Further, all actions and behaviors as a teacher are informed by extensive personal beliefs and relevant understandings within the fields of brass playing, musical instruction, and learning theory; therefore, an investigation of her methods must include an overview her value system as a musician and teacher.

For this reason, and because it is reflective of Kagarice's own consistent practice of first imparting information and then implementing it, this chapter presented an overview of the key points in her teaching philosophy, as understood both through interviews of the primary and secondary subjects and observations of lessons, and the instructional phases observed in lessons as the vehicle for implementing her value system.

V – ANALYSIS AND INTERPRETATION OF FINDINGS

Overview

The purpose of this study was to observe and record the pedagogical practices employed by Jan Kagarice within the context of applied musical study on trombone. Based upon an initial review of her practices using both print resources and information gathered through a preliminary study, a three-part conceptual framework was built using relevant literature in the areas of the physiology of performance on brass instruments, the context of the larger environment of applied teaching in music, and strategies relating to Montessori – constructivist – teaching.

This inquiry was aimed at answering three research questions for the purpose of building a profile of practice which will codify the work of this teacher for the benefit of the field of brass teaching and the greater community of applied musical study. The goal was to extract relevant ideas and strategies which could be generalized and used within other instructional contexts. The research questions are as follows:

1. What pedagogical dimensions can be observed in Jan Kagarice's activities, actions, and behaviors within the context of applied trombone lessons?
 - a. How do these activities relate to the physiological aspects of brass playing?
 - b. How do these activities relate to a Montessorian's perspective?
 - c. How do these activities relate to the prevailing context of applied teaching?
2. What practices emerge as large-scale themes from within the patterns of activities exhibited by Jan Kagarice in an applied brass context?
3. What large-scale themes can be organized into a profile of practice which characterizes the teaching philosophy implemented by Jan Kagarice in an applied brass context?

Data were collected through direct observations of lessons, primary and secondary subject interviews, and a review of relevant documents. This chapter will first summarize the data, and then answer each of the research questions, both within the environment of Kagarice's studio, and through the lens of the greater context of the learning theories presented in the conceptual framework of this paper.

Summary

Jan Kagarice's philosophy of teaching is a hierarchy of inter-related goals stemming from the overarching premise that all behaviors and actions are informed by a clear understanding of context and motivation. As she states, "why I am doing it has everything to do with what I am doing." In the largest sense, this emerges as a level of mindfulness in her work; she does not choose any teaching strategies without a clear end-game in mind. Her value system directly impacts teaching behaviors and is therefore an important aspect of understanding her work.

The omnipresent goal in Kagarice's approach is the expression of music as a communicative art form. She places great value on actualizing the personal creativity of her students so that they feel empowered to consistently impart their ideas through the medium of sound. Kagarice defines an artistic mindset in terms of the ability to become acutely aware of one's life experiences so that new perspectives can be discovered and explored. It is the role of the artist to express divergent ideas; therefore, the student must ultimately learn to function independently in order to fully realize their artistic voice. This core philosophical stance motivates Kagarice's teaching strategies in all areas, including the teaching of technique.

In order to keep this goal in place throughout the learning process, she approaches instruction from the perspective that musical performance is a holistic activity which requires the balance and synthesis of intellectual, physical, and emotional capacities; for this reason, instruction is multi-faceted at all levels. Specifically, Kagarice works to create a learning environment in which the student has a clear understanding (intellectual) of the reasoning behind their behaviors, is in a physical state conducive to realizing musical goals, and feels comfortable taking action (emotional). No skill-set or competence is separated from the whole; rather, learning encompasses understanding, feeling, and doing throughout the instructional process.

To that end, Kagarice first establishes a strong rapport with the student so that learning is predicated on the positive affective states of *trust* and *safety*. Specifically, students report that they can trust Kagarice's mentorship on both professional and personal issues, and they feel her guidance stems from a genuine interest in their well-being. Because Kagarice opens a cooperative dialogue with her students, they also feel recognized and respected as an individual, and appreciate the fact that instruction is tailored to their needs and interests.

Kagarice builds on constructive rapport by creating feelings of *safety* around the learning experience. Progress is facilitated incrementally (proximal goals), by building on what the student already knows and/or does well. Kagarice describes this using the phrase *making a match*, which refers to the strategy of connecting new information to existing understandings, so that the student feels confident acting on what they have learned. This technique is predicated on strong rapport because the teacher must be equipped to gauge what types of content or experiences will generate a point of

agreement (or match) for the student. Intellectual, physical, and emotional learning are integrated in that all of these capacities are avenues for *making a match*.

Building on rapport, the teacher is positioned to act as a facilitator. Primarily, the instructional goal is to guide the student's focus of attention so that learning can take place. This occurs on two levels. First, the student practices mindfulness, or consciously directing focus to a desired thought. Second, Kagarice works to incorporate creativity and expression into the music-making process so that focused concentration becomes an intrinsic byproduct of connecting authentically with the art form. Students describe the ideal state of focus as getting into a "zone" which closely mirrors the concept of *flow* (Csikszentmihalyi, 1996).

Primarily, being able to focus attention is required in order to learn technique, which is approached through the concept of *form follows function*. This refers to a process of skills acquisition whereby the player focuses on a goal while repeating a targeted action and refining it through repetition, trial, and error. Specifically, the player focuses on *function*, which in brass playing is the act of *blowing*, or moving air outward, so that the body produces the form required to realize that goal. The purpose of instruction is to bring the player into a state of awareness which allows them to sense and consistently produce resonance, which Kagarice defines in terms of finding a balance with the resistance of the instrument.

These goals are consistently approached from a positive, proactive perspective in that Kagarice and her students tend expand what is working, instead of pointing out errors or shortcomings. Typically, this takes the form of brining the focus of attention to

musical issues, so that the player is engaged in expression and creativity, rather than a desire to avoid errors. Students' descriptions of performance situations favor a view of themselves as artists with "something to offer and nothing to prove." Specifically, students report that they are able to release negative feelings, such as self-doubt and become optimistic about their ability to be successful.

Because training is an individualized process, students express the idea that there is no one physical approach that will work equally well for all players; therefore, they have chosen to let go of the prescriptive methods which characterize much of their past experiences, and to transition to Kagarice's approach to playing. While undergoing this transition, players report feeling confused as the brain and body struggle with conflicts between methods for a period of time, but after that passes, students feel that they are able to release tension and more accurately discover and realize their musical voice. This leads to the generalized conclusion that technique is an individualized *process*, rather than a set of skills which can be directly taught.

In order to implement these philosophical motivations, Kagarice is observed using five broad instructional phases, which are: *rapport, instruction, training, automation, and independence*, within the context of lessons. Each of these phases has targeted goals. The process is progressive and hierarchal; however, implementation is dynamic and adaptable, as goals and learning modes are revisited based upon the needs of the student. Younger players, or those who have spent less time studying with Kagarice, will more frequently be observed in the first three phases; whereas, more experienced students are better equipped to function principally in the last three phases.

The purpose of the *rapport* phase is to build social connections so that the student feels comfortable in the environment. Kagarice also uses discussions and interactions to diagnose the student's learning and communication style, so that instructional strategies will match their needs and goals. Kagarice also believes that strong rapport helps non-verbal communication, such as demonstration, to be more effective. This is significant because later instructional phases, especially *training* and *automation*, make extensive use of a musical dialogue between the student and teacher.

Rapport is extended into the *instructional* mode, which is aimed at conveying the information needed to motivate action. Kagarice prefers to "lecture" in a way that is informal and conversational. Once the student and teacher can engage socially, she redirects discussions to the topic at hand without the process being perceived as overbearing or intimidating for the student. Because discussions are interactive and cooperative, Kagarice is able to create feelings of "safety" around the learning experience, meaning she can introduce new concepts in a way that *make a match* with what the student already knows.

Once the student understands what they are expected to do and why they are being asked to take action, the *training phase* allows time for the learner to practice *doing* under guidance. This is a highly active phase in which Kagarice offers constant feedback, through verbal cues, modeling, and physical manipulation, as the student engages in repetition, trial and error. Two primary learning domains are employed at this stage. First, Kagarice brings the focus of attention to blowing in a state of physical release so that the player can come into balance with the resistance of the instrument and consistently engage in resonance. Second, this is coupled with conceptual/musical

training which emphasizes the aural aspects of music as a means to guide the mechanisms of tone production to the desired musical outcome.

As the student gains independence and motor function becomes ingrained, performance displays a level of *automation*, which is akin to the ideal form of conceptual brain/body balance described by Arnold Jacobs (Frederiksen, Arnold Jacobs: Song and Wind, 1996b). Musical phrases are realized solely through an auralization of the desired outcome, meaning the player is capable engaging in a “singing thought mode” (Loubriel, 2006a) which generates the motor skills required to execute the target phrase. In this mode, lessons are characterized by a high level of non-verbal (musical) communication and/or short *catch phrases* which recall previously discussed information.

The overall goal of instruction is to produce fully actualized musicians capable of thinking artistically and realizing goals through a autonomous application of the methodology; therefore, the last instructional phase is collaborative in that the teacher and student problem-solve as a cooperative dyad. The player now possesses a global understanding of Kagarice’s teaching philosophy and expresses those ideas, both verbally and in performance, through the lens of their own experiences, ideas, and understandings. As Kagarice describes it, the learner “owns” the information at this stage.

Three lessons were also presented as examples of these instructional phases. While each of these lessons displayed a distinct emphasis relative to the needs of each student, all lessons employed multiple instructional phases. Andrew, is a younger student who struggles with social challenges and difficulties focusing on the task at hand. Kagarice primarily employed the *rapport* phase during his lesson and significant time

was spent socializing on topics unrelated to trombone playing or other lesson goals. By contrast, Aaron, an older student whose rapport is firmly established, needed support releasing physical tension, so he spent the majority of the lesson in a *training* phase. He reported new understandings in terms of becoming aware of pre-existing and habitual tension at the conclusion of this lesson. Josh, an advanced player at the doctoral level who has studied with Kagarice for many years, can function autonomously in many respects; therefore, the bulk of his lesson was in the *automation* and *independence* phases.

Analysis

The primary aim of this research project was to document and organize the pedagogy of a master teacher for the purpose of informing teaching strategies within the field at-large. Gholson (1993) compares this type of interpretation and analysis to the Schenkerian school of thought in music, which seeks to find the “goal-directed motion” present within a larger work. From this perspective, the detours, ornamentations, truncations, and other modifications which emerge in a dynamic social setting can be named and situated based on their relevance to the greater picture.

In order to generate findings from the current body of data, the researcher looked for actions, assertions, behaviors, or theories which appeared to coalesce under common categories or goals. Specifically, connections between Kagarice’s thoughts and behaviors were cross-referenced with specific factors that emerged in lessons and interacted with the unique needs of each student. While there are many details and nuances of meaning and purpose which emerged from both interviews and observations, the goal is to provide

the field with usable models that may inform practices within other contexts. To that end, five primary findings were generated. They are: *metacognitive skills*, *sensory-conceptual instruction*, *direction management/three period lesson*, *a holistic model for accessing ZPD*, and *a model for unified function in applied musical instruction*.

Finding #1: Metacognitive skills

One of the unique and notable aspects of Jan Kagarice's teaching is her ability to hold large, over-arching philosophical structures in place while managing and directing the everyday needs of the learner. This quality has been targeted as an important aspect of facilitating meaningful progress over the long term (Gerald, 2008). Strategies and behaviors consistently maintain a connection to the greater purpose, which is to honor the communicative nature of musical expression. Students learn the *why* behind the *what*, meaning they gain *metacognitive skills* – they learn about the learning process itself. This generates more positive and successful practice experiences, (Barry & Hallam, 2002) and may improve intrinsic motivation through a meaningful personal connection to the art form (Bain, 2004). Students also report that the presence of an underlying artistic imperative relieves performance anxiety in that it takes some of the pressure off the individual. This can be interpreted as improving feelings of self-efficacy (Artino, 2006).

Metacognitive skills are necessary because Kagarice's approach to musical expression is *syntactically dense* – it is a complex symbology in which the component parts are not wholly consistent across distinctive contexts (Howard, 1971). This requires a deeper level of analytical and affective interpretation because nuances such as auditory and visual pattern, rhythm and symmetry, or inflection and tone generate multiple correct

interpretations. For example, a quarter-note has a finite value, but when combined with other musical elements, such as timbre, dynamics, or tempo, its communicative power changes, or even evolves; thus, from an artistic standpoint, students require not only information, but the ability to successfully apply it to various musical contexts.

At the lowest level, learning is the same for everyone; however, as understandings grow, information becomes adaptable and dynamic. For example, all players learn to *blow*, or to focus on the outward flow of air. For the beginning student, this is a distinct skill set which is isolated and practiced, but for the advanced player, the *outward flow of air* is connected to the process of expressing musical ideas, or the *outward flow of information*. The meaning of *blow* evolves when it is *placed in the context of the greater picture*; therefore, music-learning is cyclical and interconnected, with no single piece of information taking precedence over any other, or over the totality of the whole. Skill-sets are not mastered singularly for their own sake, but for the purpose of connecting them to the greater purpose of creative expression.

While Jan Kagarice's physiological method is unique, and represents a divergence from the field at large, it is successful not *solely* for this reason, but also because she is masterful in linking the way we play with the reasons why we do it. This is the essence of *form follows function* or *what follows why*. By focusing on the outward flow of air (*blowing*) we are also learning to express the outward flow of *information* which is the core of the communicative nature of music-making. These types of connections generate a level of integrity and continuity which strengthens as the student progresses. The more they know, the more learners understand about what they know, and the closer they move to functioning independently.

Kagarice's approach is dependent upon these metacognitive skills, because the acquisition of technique is augmented by a clear understanding of the process and method. Instruction is not only about brass playing, but the attitudes, affective states, and experiences which collectively build mastery and expressive performances; therefore, her approach to brass physiology cannot be extracted from the totality of her pedagogy and presented as prepackaged knowledge for mass consumption by the community as a whole. Her students undergo a comprehensive learning process, so reducing her method to individual, discrete learning targets will fall s. By contrast, writings in the field of brass pedagogy tend to place a heavy emphasis on the physicalities of playing (see "Behaviorist" methods in brass pedadogy), while ignoring or minimizing the emotional states and/or intellectual understandings which must accompany them.

Nonetheless, there are some related ideas within the field, particularly in reference to Arnold Jacobs, which do address metacognitive skills. Loubriel (2005) describes an "integrated master teacher," as one who understands the interconnectedness of the composite skill-sets required for musical performance and is equipped to manipulate the relationships between them as a means for facilitating improvement in the learner. This definition matches Kagarice's approach; thus, she also serves as an exemplar of integrated teaching for the field at-large.

Specifically, Loubriel conceptualizes integrated teaching through the model of a *holarchy* (Koestler, 1967) – a model of hierarchical interdependence within a complex symbology – and its composite *holons* – an element which is both a whole unto itself and part of a larger framework, or a *whole-part*. This "hierarchy of relations" assists in "analyzing the micro-level of individuality and the macro-level of collectivity."

(Edwards, 2003, para. 7) Kagarice's value system, as it is taught, implemented, and shared within her community of students, can be conceptualized through the model of a holarchy, which provides structure for gauging student progress and understanding the interaction between interrelated goals. These are the types of metacognitive skills and connections which need to be forged in order for the student to function as a fully actualized, independent musician.

Figure 5: Holarchy of Applied Instruction in Music



Situated at the top is the greater purpose: communication through the medium of sound. As Kagarice describes, music is a form of expression “from humanity, about humanity, for humanity”; therefore, the player must be versed in the language and experienced in the idioms of the specific style and genre. In turn, this is only possible if the individual has the ability to read and understand notation, can generate a clear internal musical concept, is confident enough to express ideas, and possesses the necessary physical skills to realize thoughts through automated motor function. While each of these capacities can be viewed (and even taught) as singular skill-sets, they only become *useful* to the greater purpose when integrated; therefore, the totality of the holarchy must be present at all stages of instruction. The purpose of blowing, moving the slide, learning new techniques, or of progressing on the instrument on any level is to communicate thoughts and feelings.

This is an important distinction in that, while the model is hierarchical, it is based upon interrelationship and interdependence. Students do not *arrive* at the communicative aspects of music after working through a prescribed set of steps; rather, music begins as a social art form. All positions on the holarchy are both part and whole – they are both individual skill-sets and a part of the greater goal; therefore, the *reason* to engage in the process is to express oneself through sound. In Kagarice’s terms, this is the *why* which determines the *what*, or how we proceed. This prevailing theme infuses all aspects of the experience, even at the earliest stages of instruction.

Viewing musical instruction from an integrated stance allows skills to be approached from a variety of angles. For example, the ability to formulate and impart musical ideas, which is the top level of the holarchy, can be positively impacted by

working on lower level areas, such as ear training, social issues such as rapport, willingness to learn, or the ability to focus attention. Aspects of the holarchy which are lagging, not clearly understood, or have not been incorporated into the whole will interfere with the functioning of all other holons in the system. This is why Kagarice's instructional approach addresses the *whole person* in a way which strives for balance as the individual progresses and improves. Loubriel (2006) refers to this as *upward* and *downward causation* – skills are positively or negatively impacted by the success level of their composite holons.

Kagarice also provides a larger context, or holarchy, for conceptualizing the relationship between music-making and the community in which it is undertaken. This perspective is directly related to the teaching studio, because it is the *why* behind the *what* as it functions at the largest level. Without an understanding of the greater purpose, musicians will not be equipped to actualize their musical thoughts within the public sphere; therefore, the social aspects of music-making – performance, ensemble skills, networking – form an important component of instruction. The goal of musical instruction is to guide students to becoming confident, open, thoughtful, curious, balanced human beings who are equipped to act on their world in positive and productive ways. This perspective closely matches a constructivist view of student success (Loyens & Gijbels, 2008).

Musical study contains an important social imperative, in that the act of music-making is a vehicle through which “healing” connections can be made. This is an important perspective for musicians to consider. Art is a key indicator of social climate,

and in many cases, a catalyst for change. Kagarice defines the training of an artistic temperament in these terms:

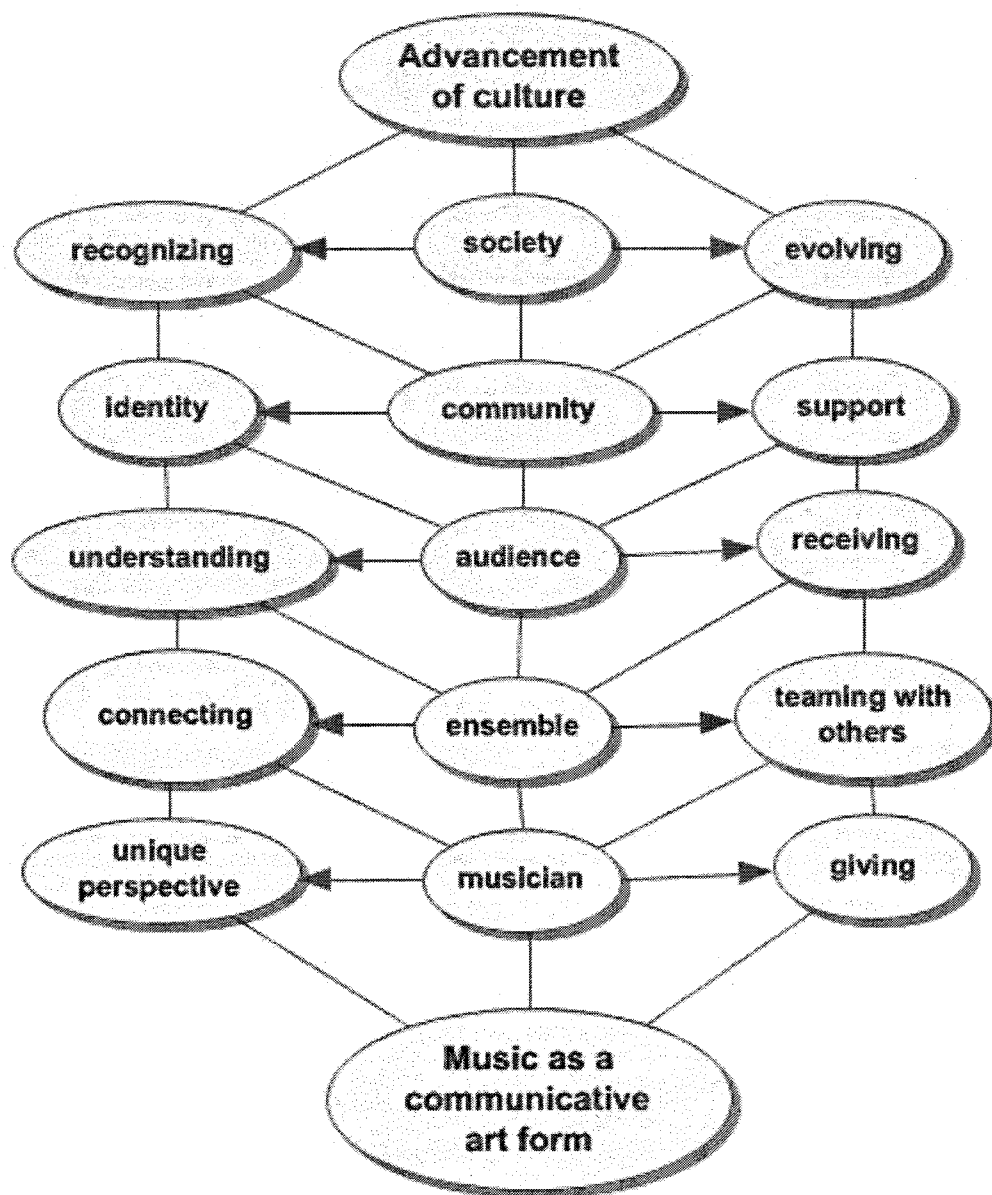
...To look in a way that they really see - they start to see things that they never saw before and they start to hear things that they never heard before, and they start to make their own generalizations.

This view of *mindfulness* or *heightened awareness* as the defining characteristic of an artist is linked to some significant perspectives in the field of aesthetics. For example, Langer (2005) asserts that mindfulness – the ability to notice all aspects of a given environment or context – is the fundamental skill of an artist. Greene (1995) also asserts that the purpose of aesthetic education is to build in the learner a capacity for noticing which empowers the individual to assess and re-imagine possibilities relative to their own sphere of influence. Similarly, Kimmelman (2005) states that even a “circumscribed world can be made to seem enormous though a rich enough imagination.” (p. 20) Berger (1977) describes works of art as more than “marvelously made object[s]” in that they are rife with political, social, personal, interpersonal, and cultural commentaries.

It is the artist’s ability to *see* or to *perceive* these nuances, and often their capacity to meaningfully diverge from them, which empowers communication through the aesthetic domain. The artist lives constantly in a heightened state of awareness; therefore, the artistic temperament is characterized by the ability to integrate disparate elements into novel products which diverge from convention (Gardner, 1973). It is this perspective that the artist has to offer the world, and why their work is an important *holon* within the greater context of society.

The holarchy of musical communication as a catalyst for the advancement of culture is a useful tool for conceptualizing purpose and context within the applied studio. (Figure 6) Instruction does not occur in a vacuum. While there are skills the student must obtain and master, these capacities only become purposeful when placed within the context of a greater social environment, through performance. Students must build social

Figure 6: Holarchy of Individual's Relationship to Cultural Advancement



skills conducive to efficient and positive ensemble experiences. Likewise, cooperative musicianship only becomes meaningful when presented to an audience through a concert. Similarly, the audience is derived from a community of supporters who generate a sense of cultural awareness and identity for the entire experience. Collectively, musical communities around the world join to nurture and support artists, leading to the advancement of culture in the larger sense. This interdependent web is a necessity if society is to continue to benefit from meaningful musical endeavors; therefore, the scope of this holarchy must be present within the teaching studio.

This is helpful to the applied teacher in that it reveals the types of social skills and understandings students need to have if they are to be successful within a greater social context. Kagarice is aware of these issues and continuously works to connect her students to the purpose of music-making. She does this both on a material level, by helping them with practical issues such as setting goals, promoting themselves, writing resumes, and interacting positively with others, as well as on a more spiritual and artistic level, by empowering them to engage in creative expression throughout the learning process.

From the widest perspective, this is a form of constructivism in which the student builds their own meaning through authentic encounters with the art form. (Loeffler, 1992) Kagarice summarizes this stance with her assertion that the most important measure of effective teaching is not how well the student performs, but “how much they love music,” meaning the student’s engagement with learning is an important indicator of success (Loyens & Gijbels, 2008). This is a paradigm shift in terms of the over-arching

goals of music education, since most public school music programs, especially in Texas, where Kagarice teaches, assess student outcomes in terms of competitive successes.

Finding #2: Form Follows Function/Sensory-Conceptual Instruction

In comparing Jan Kagarice's approach to a survey of relevant literature in the field of applied brass pedagogy, it is clear that many of her strategies are derived from perspectives and methods which have been disseminated by other teachers; however, she has restructured and reordered existing knowledge in a way that provides a clear and detailed model for instruction which is unique to the field. Specifically, her overarching goal of *form follows function* combines conceptual teaching in the style of Arnold Jacobs' *Song and Wind* (Frederiksen, 1996b) with a comprehensive understanding of the sensory aspects of performance, similar to those outlined by Jacoby (1990), Adam (1975), and others; therefore, her approach to motor skills acquisition is most accurately described as *sensory-conceptual*.

This is significant because it may provide an important element of structure for the model of conceptual teaching as it has been propagated and practiced in the field. While the learning outcomes of *Song and Wind* are clearly defined, there is a gap in the literature in terms of how to *implement* Jacobs' ideas. The overarching goal is to produce musicians who are "storytellers of sound," meaning musical thoughts are consistently translated through the medium of the instrument; however, this process is clearly developmental and progressive, given that realizing musical thoughts requires the acquisition of complex motor-based skill sets, positive affective states, and comprehensive cognitive understandings. Although Jacobs was known to have facilitated

rapid improvement in his students, there is little known about the process for arriving at that end. What tools can be used to guide the player into a physical state conducive to actualizing musical thoughts? A sensory-conceptual perspective may fill in the gap between *conceptualizing* and *doing*.

At the most basic level, Kagarice's application of *form follows function* is a match for *Song and Wind*. At the core of Jacobs' ideas is the assertion that action is a "study of products," meaning the brain imagines outcomes and the body works to match those goals. In his own words:

The human body is perhaps the most complex "machine system" on earth. However, complex systems have simple controls (like a car). In the human body, the simple controls are in our brain so you can be free to cope with life outside us and not inside us (in Frederiksen, 1996b).

Similarly, Kagarice's application of *form follows function* directs the student to focus attention on a targeted goal, such as the balance point within the instrument, while repeating the action under guidance until motor function reaches balance and efficiency. Ultimately, the goal is for movement to be directed solely through auralization, meaning the player conceives of the sound they wish to make and the body consistently actualizes those thoughts. At this level, the player imagines a musical phrase and the body realizes that concept through muscle memory. The player no longer has to think about how to execute the movements required for performance, which has been identified as particularly helpful to the expression of a musical product (Buck, 1944; Weast, 1979; Sloboda, 1985; Bloom, 1986; Frederiksen, 1996b Verdolini, 2000; Kutz, 2003; Nelson, 2006; Holding, 2008).

In this learning paradigm, *modeling*, or teaching through imitation, is the dominant strategy. The student is given aural representations of the desired technique or musical inflection, and through repetition, trial and error, they work to replicate that ideal. Through this process, there are no directions regarding what the muscles are doing, how the player should approach movements, or what they should be feeling in the body. In fact, Jacobs stated “Players who think mainly *song* use only the muscles that are needed to duplicate the musical notes in the head rather than using excess muscles to achieve the right *feel*” (in Scarlett, 1999).

This distinction between *song* and *feel* highlights a fundamental schism in the field that Kagarice has successfully bridged. Jacobs’ definition of *feel* -- the conscious setting of a pre-determined muscle configuration in the embouchure or elsewhere – was focused on keeping players away from an awareness of the location, or *feel*, of their musculature. This was in response to the prescriptive methods of his contemporaries, such as Reinhardt and Farkas. As a result, the idea of “playing by feel” came to be viewed with disdain by Jacobs’ followers; therefore, in a broad sense, players who follow a fully conceptualized approach are connected to the experience cognitively and affectively, but their avoidance of *feel* anesthetizes the sensory aspects of playing. They are disconnected from the dynamic experience of *doing*.

By contrast, Kagarice’s definition of *feel* focuses on an awareness of balance, resistance, and resonance which emerges as the player’s air interacts with the acoustical properties of the instrument. This form of sensory feedback, is not experienced within the muscles of the body, but in the *feel* of the airstream itself. As Kagarice says, the focus of attention is “way out front,” meaning the goal is to sense the balance point in the

instrument where resonance is generated. In terms of the details regarding airspeed and its relationship to pitch, Kagarice is situated rather closely to Jacoby's (1990) methods.

What is significant about Jan Kagarice's method as compared to existing perspectives on muscle automation is that she supports conceptual learning with sensory awareness and feedback. This provides an important connection between the player's musical instincts and the physicalities of the instrument. Verdolini (2000) refers to this as *implicit learning* – the body learns complex skill-sets without the individual being consciously aware of the specific movements or actions involved. Practicing in a state of sensory awareness *primes* the body to act in certain ways; when it finds an efficient function, it will repeat it. This is the purpose Kagarice's use of the straw as a means to practice the *action* of blowing. When that same *action* is taken to the instrument, the body is more likely to replicate the *feel* of open, free, released blowing.

The sensory aspects of performance are a subset of the conceptual approach. The goals are the same: a fully actualized musician whose thoughts and feelings are consistently realized through efficient and intuitive motor skills. By engaging sensory awareness through the conceptual training process, the player develops an internal road map for understanding their connection to the instrument. The experience is unique to each player, so it cannot be directly taught; rather, the teacher guides the student into a state of mindfulness while learning through *doing*, and the player charts a path of efficiency and balance because they are equipped to notice what *feels* and *sounds* good, and so can draw internal connections between those states. As Kagarice states, "air becomes sound."

Finding #3: Micro and Macro Pacing: Spiral Curriculum

The *five phase instructional* model employed by Kagarice is a form of *direction management* – the setting of long and short term goals for the purpose of facilitating progress – as defined by Kennel (2002). Specifically, the daily activities and strategies employed in lessons target larger, overarching goals. Based on her Montessori training, this type of pacing appears to be a derivative of the *three period lesson* conceived by Séguin and advocated by Montessori (1912). Kagarice’s pacing can also be linked to the idea of teaching from a *gestalt* perspective, which has been described by Palmer (1998), as well as the model of a *spiral curriculum*, first introduced by Bruner (1960).

Like Montessori’s model, Kagarice guides the student through awareness, naming, practice, implementation, and independence. She first brings the student into the environment and guides them to become mindful of their experiences so that they are better equipped to notice what is happening, which is similar in scope to the *pre-stage* described by Montessori. She then conveys information and names concepts, mirroring Montessori’s *first period*, and then allows time for practice through repetition, trial and error, while continuing to offer guidance and feedback (*training* and *automation*), such as in the *second period*. As the learner gains more refined skills and confidence increases, the teacher steps back so that autonomy can develop. This is the *third period* (*independence*).

Although the *three period lesson* is progressive and ordered in a general sense, in practice, Kagarice employs this model at both the micro and macro levels, meaning instruction targets learner autonomy both within the context of both short and long-term

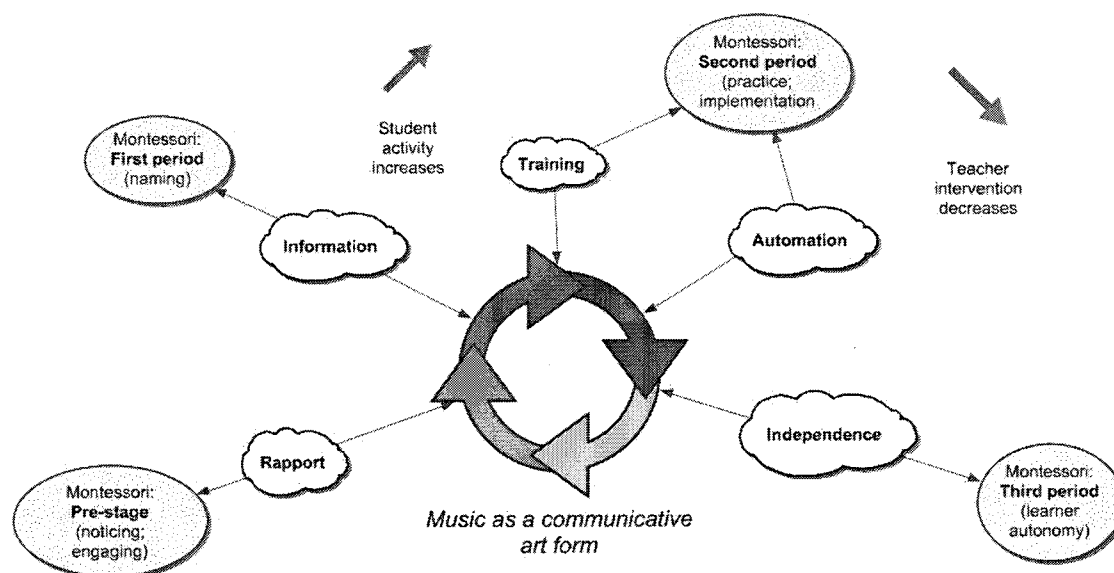
goals; therefore, pacing is cyclical and seeks to integrate knowledge into increasingly complex understandings and practical applications. This is evidenced in a comparison of Andrew and Josh's lessons. Although Andrew was not yet equipped to function independently in all aspects of his playing, he exhibited autonomy through an explanation of a key concepts (blowing vs. breathing). He was momentarily engaged in the fifth phase (*independence*), and this was encouraged by Kagarice. Conversely, Josh – an advanced player – was observed engaging in a training mode. Although his skills are highly developed, Kagarice continues to revisit key aspects of the process for the purpose of reinforcement and potentially, the emergence of new perspectives or ways of understanding existing information.

Because Josh is older and more experienced than Andrew, his interactions and discussions with Kagarice tend to be more collaborative and dynamic, but the topics continue to center on the same core issues that emerge in all lessons. At the macro level, Josh is functioning independently. He possesses a comprehensive understanding of Kagarice's method and implements her strategies and ideas in his own teaching practice; however, within the context of daily instruction – the micro level – he continues to work through fundamental aspects of the process, albeit from a more comprehensive level of understanding than is observed in younger students. Similarly, Andrew is still working to build a usable rapport with his teacher, but he is also capable of engaging in advanced instructional phases for parts of the lesson.

Given the overarching goal of independence, as the student progresses, there is an inverse relationship between teacher interventions and student activities, as shown in Figure 7. While the teacher is highly active in guiding the student's focus of attention

and redirecting thoughts, feelings, and actions in the early stages, as the student gains understanding, facility, and confidence, instructional supports are gradually retracted. Ultimately, the student and teacher begin to work collaboratively, and the player eventually emerges from the process as an autonomous artist. Figure 7 conceptualizes student-teacher interaction in terms of the *five phases of instruction* as they correspond to the *three period lesson* of Montessori.

Figure 7: Five Phase Model/Three Period Lesson



Over time, this process is superimposed across many lessons, or even years of study. The full scope of the physical, intellectual, and emotional aspects of performance are not absorbed in one sitting, or initially as a complete whole; rather, the individual components of expression are discussed, practiced, and mastered as a means to build an increasing complex understanding of the as components of the musical language. Thus, progress is cyclical and incremental, as individual concepts are first learned, and then integrated into the overarching goal of imparting original musical ideas.

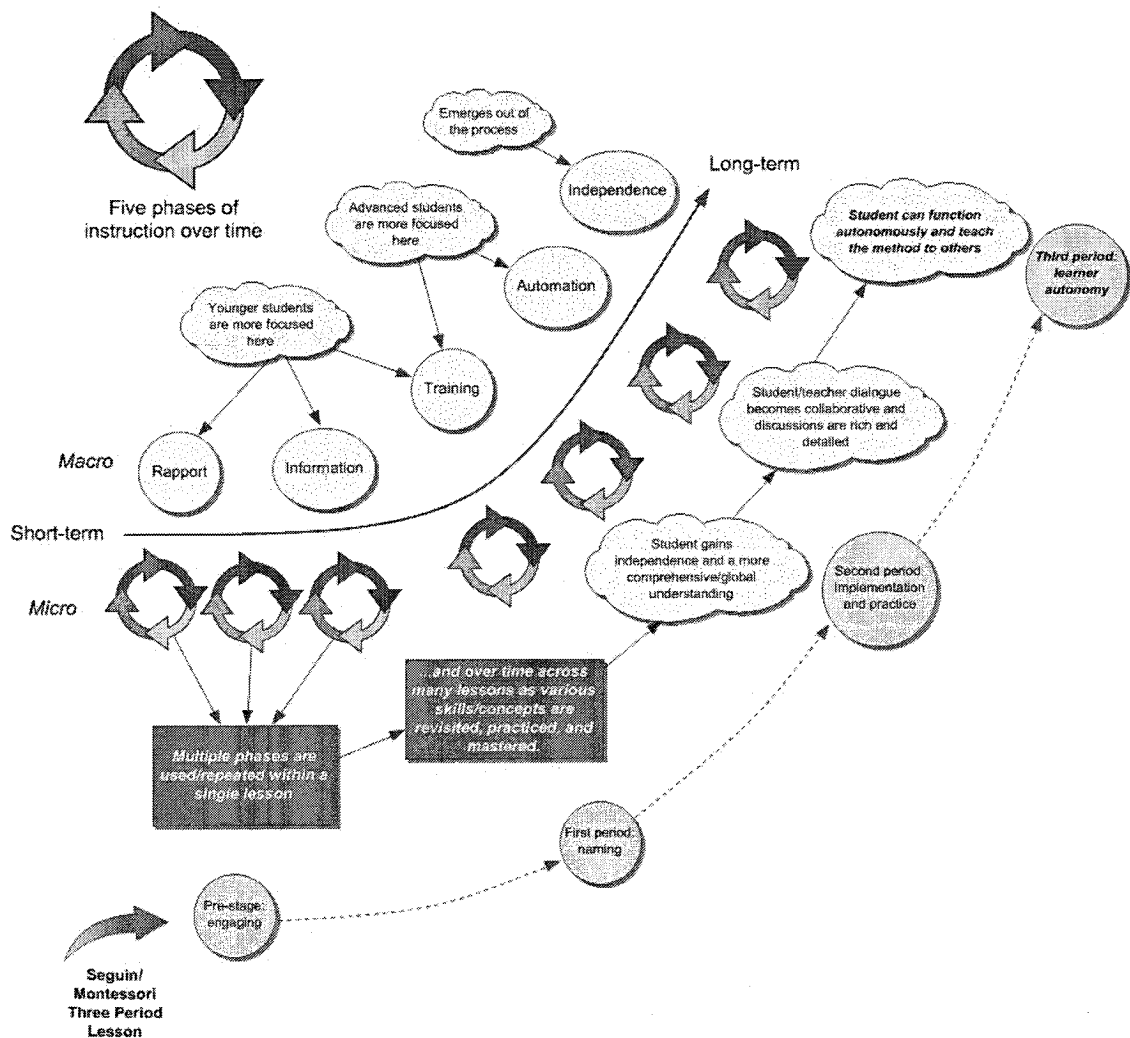
This is an important distinction in that the teacher must be both aware of and realistic about what the student is or is not equipped to manage independently. Musical expression is an important aspect at all levels of performance; however, it is a composite of many individual conceptual understandings which are also intrinsically linked to the action of playing the instrument. Given this, the teacher cannot simply instill or deliver an expressive imperative and realistically expect the student to implement it; rather, this develops over time as the student gains the tools to understand and actualize their own musical voice.

At the *micro* level, lesson interactions remain fairly consistent, as all students are observed undergoing the same types of behaviors and actions; however, over time, the learner gains a more detailed and comprehensive understanding of Kagarice's teaching practices and philosophy, so that their experiences within the *five phases* evolve. For example, while Answer was capable of expressing a certain level of independence, his ideas were essentially a reiteration of what he had heard from his teacher. By contrast, Josh was capable of not only repeating what he had been taught, but of adding his own ideas to those concepts as well. His lesson was more collaborative and dynamic, while continuing to focus on the same core issues represented in the *five phases*. When viewed at the *macro* level, Kagarice's pedagogical approach guides the student through a developmental process which culminates in learner independence (Figure 8).

In a broader sense, this type of model has been conceptualized by the field in terms of targeting the *gestalt* nature of learning. Palmer (1998) describes this as "holographic logic," meaning, like the composite images of a hologram, each discipline contains underlying thematic truths which define the prevailing nature of the subject as a

whole. By exposing the learner to the fundamental nature of the discipline as it is practiced by those already working within the field, it is possible to spark a level of curiosity which motivates a more detailed investigation of the subject. Learning then evolves through increasingly complex levels of understanding as the student participates actively in the norms and practices of the field by working out conflicts, solving problems, and exploring the details which are required for comprehensive understandings and informed action. Instruction begins with broad conceptual ideas which are fleshed out in greater levels of specificity as the process evolves.

Figure 8: Five Phases: Macro and Micro pacing



This perspective mirrors many aspects of the *spiral curriculum* described by Bruner (1960), which conceptualizes learning as a cyclical process in which core conceptual ideas are first introduced and then revisited at greater levels of complexity over time. Geraldi (2008) links this model to music-learning and asserts that it is an effective strategy for ensuring that students make long term progress toward a consistent set of goals. He states, “As concepts accumulate, what is learned at each step carries over to the next learning sequence.” If short-term activities (micro pacing) are not informed by long term, overarching goals (macro pacing) in this way, then instruction primarily takes the form of a reaction to whatever need or deficiency may appear in the student on a daily basis. This is haphazard in terms of *direction management* – the setting of long and short term goals (Kennell, 1992) – in that instruction will undergo too many detours to facilitate meaningful long term growth.

Kagarice’s pedagogical approach is then conceptualized as an integrated, cyclical process which both adapts to the immediate needs of the learner, while keeping the continuing goal of expression of musical ideas through performance in place. Although the process is dynamic, it is also progressive in a general sense. Effective communication during the instructional phase is dependent upon the quality of student-teacher rapport. At the same time, efficient training requires that the student understand the information given to them during the instructional phase, and that they feel comfortable taking action, which again emerges from social connections and rapport. Automation, which is a developmental stage at which the student’s can direct motor skills through auralization, requires consistent training and the ability to cognitively focus on the desired musical goal. Independence is the synthesis of all these modes.

The key to this approach appears to lie in pacing. Based on the developmental nature of the inter-related capacities Kagarice wishes to teach, she targets the level at which the student is equipped to function for a given skill set and builds instructional activities around the appropriate phase (see “Finding #3”). Over the long term, this facilitates a progressively developmental process which revisits and builds on core fundamental aspects of musical expression, while continuously targeting the smaller, more detailed aspects of the component parts of that goal.

Finding #4: A Holistic Model for Accessing ZPD

Given that the five phases of instruction are implemented according to the learning needs of each student, Kagarice clearly employs a diagnostic process in order to determine which phase to use when. This targets the *Zone of Proximal Development* (ZPD), in that the teacher formulates a targeted path of progress which is tailored to the current skill level of and goals of the learner. In light of the step-wise nature of the five phase model, and Kagarice’s emphasis on balancing cognitive, affective, and physical capacities through the instructional process, the method by which she hones in on and expands each student’s current state of thinking, feeling, and doing has potential to inform generalizable perspectives on use of ZPD within the context of applied music instruction.

There is precedent for viewing ZPD in terms of not only cognitive states, but as a social issue as well. Facilitating progress in the learner is not only about skills acquisition or transference of knowledge, but is predicated on the presence of positive affective states. In order to proceed *into* the uncertainty of change, students must feel

secure within the environment. Brookfield (1990, p. 163) asserts that without feelings of trust, students are “unwilling to submit themselves to the perilous uncertainties of new learning. They avoid risk. They keep their most deeply felt concerns private. They view with cynical reserve the exhortations and instructions of teachers.”

Principally, the student must feel *safe*, which is a multi-leveled social and emotional state. First, they must feel safe with the teacher and method they are being taught. This grows out of the quality of student-teacher rapport, and so adds an important social component to the process (Clemmons, 2007). Second, learners need to experience feelings of self-efficacy, meaning they not only believe they possess skills, but also that they will be successful in implementing them.

Specifically, students are most effective in performance if their self-image somewhat out paces their actual skill level, meaning their self-worth is slightly inflated. Challenging proximal goals, or learning targets which incrementally build on what the student already knows or does well, give learners the opportunity to successfully apply their skills and have been identified as an effective means of boosting self-efficacy. (Artino, 2006) Consistently targeting and building on the student’s ZPD can have a synergistic effect: small, incremental successes breed confidence, which in turn generates the positive affective states needed in order to continue progressing.

Kagarice describes this as “making sure it’s safe,” meaning the learning process is one of empowerment and discovery. Her students appear to have benefitted positively from this aspect of her instruction, as evidenced by their optimism regarding their own potential for progress (see “Supplemental principle #1”). From an overarching

perspective, this is another way to build independence into the learning experience. As students have the opportunity to experience their own successes, they learn to depend on their skills. Potentially, this may add to feelings of intrinsic motivation (Bain, 2004), which can boost progress in the long-term.

In order to generate this type of *safety*, Kagarice takes her cues from the learner, or in Montessori terms, “follows the child.” For example, her concept of *making a match*, which refers to her assertion that new learning should be connected to existing knowledge if it is to be meaningful, closely mirrors ZPD. By accurately gauging the student’s needs, the teacher can engage in an instructional mode which best suits the individual’s ability to advance at a given moment. The issue is then a matter of process. *How* does the teacher diagnose the learner’s current level?

Kagarice’s approach to this issue is somewhat different than perspectives offered by the field. For example, Gholson’s (1993) idea of *proximal positioning*, or the ability to *place* oneself in the mental, emotional, or physical state of the student, is *empathetic* in nature. By contrast, Kagarice is quick to assert that she specifically tries *not* to cycle the data she gathers about the student through her own perspectives or emotions; instead, she directs her focus of attention to the student and works to pick up *their* state being, as it manifests through their personality, actions, and reactions. Kagarice is *outwardly* focused, whereas *empathy* is more of an internalization of assumptions about how we perceive another person to be feeling.

This is reflective of one supporting principles in Kagarice’s teaching philosophy; namely, that the role of the teacher is to direct the student’s focus of attention so that

learning can take place. In the same way that directing the student's focus of attention toward sound facilitates a level of awareness which equips the learner to *notice* more about the musical language than the casual observer, the teacher learns to focus her attention on the *learner*, and in so doing becomes equipped to *notice* their behaviors. She becomes increasingly aware of social cues and learns to *read* the intellectual, emotional, and physical state of the learner. With this distinction in mind, Kagarice describes the ideal diagnostic strategy:

Knowing that you read through your own eyes, but that...it's really about learning how to **look**. To not just **look**, but to **see** - and not just **listen** but to **hear**. [speaker's emphasis] (Kagarice)

What is the difference between "listening" and "hearing?" In this context, to *listen* is to take in sensory information, but to *hear* is to interpret that information, to notice more about it than the passive observer. Interestingly, this is closely linked to Kagarice's definition of the artistic temperament: it is a heightened state of awareness which allows the teacher to pick up on subtle social cues. From this perspective, the master teacher is also a *master artist*, meaning she is modeling the ideal form of mindfulness which she ultimately wishes to impart to her students.

Kagarice appears to be highly developed in this respect. Students consistently describe her as possessing highly tuned perceptive abilities which enable her to "get into," or meaningfully connect to, their emotional or intellectual state. She seems to know what the student is thinking or feeling at a given time, as Aaron describes:

It's just unbelievable...she has this unique ability to just get into your head, you know? Know exactly what's going on... She knows what you're doing! She knows what you're thinking, and then she will say, 'That one you were thinking about it - you were thinking about doing.' (Aaron)

Kagarice views this from an aesthetic stance, using the concept of “energy.” She speaks of “good energy flow through the body” and the “exchange of energy” which defines the function of any activity or movement, but she also describes the totality of an individual’s presence using the word *energy*. Who the student is, what they believe, how they act, and all aspects of their personality collectively form the *energy* with which they will act on the world; therefore, *good energy flow* refers not only to physiology, but to the expressive flow of thoughts and feelings as they manifest through the medium of music. The purpose of the musician, or the artist, is to act on the world through the lens of his/her own sensibilities, character, and/or worldview; literally, *good energy flow* refers to the ability of the individual to send his/her ideas into the world.

It is the role of the teacher to mobilize that energy, and to help the student realize it through the medium of musical performance. Given this perspective, Kagarice defines coaching as the ability to “observe someone and understand where their energy is being blocked.” If we analyze this statement in terms of Kagarice’s overall teaching philosophy, it becomes clear that the type of observation she is describing is holistic in nature. In this context, a “blockage” is not only a physiological issue; rather, it refers to a state in which some aspect of the player’s being (physical, mental, or emotional) is not functioning in balance.

In this context, *imbalance* refers to any impediment which distracts from the desired musical product. For this reason, Kagarice often says that the goal of *lessons* is to “do less,” meaning the instructional process is focused on removing the interference which prevents the individual’s musical concept from consistently emerging; therefore,

the core diagnostic question is: *At this moment, what is the physical, mental, or emotional blockage that is preventing the student from realizing his/her goal?*

In order to bring structure to this question, it is first helpful to define exactly what each of the learning domains encompasses (Table 10). The cognitive domain determines our ability to identify a desired goal, gather the requisite information, and then focus attention on it in order to see it reached. This incorporates the informational aspects of performance, including reading skills, ear training, and theoretical analysis, and conceptual capacities such as the ability to accurately internalize the target phrase.

Table 10: Target Skill-sets: Intellectual, Physical, and Emotional Domains

Intellectual	Physical	Emotional
<i>Does the learner understand the context, expectations, and purpose of the intended goal or skill?</i>	<i>Is the learner in a physical state conducive to realizing the intended goal or skill?</i>	<i>Does the learner feel comfortable/confident taking action to express themselves through the intended goal or skill?</i>
Understanding of the method Ear training Auralization of phrase Analysis/Theory Musicological issues/style Reading skills Ability to focus attention Goal-setting	State of release Flexibility Sensory awareness Blowing Balance Resonance Automation Adaptability	Confidence Self-efficacy Trust Safety Expressiveness Creativity Instinct Pacing

Second, the physical domain describes the body's ability to match what the brain conceives. This is accomplished through *doing*, meaning it is a process which cannot be directly taught; rather, the teacher guides the student toward an awareness of physical states which are conducive to realizing the musical goal. Accompanied by mindfulness in the cognitive domain, positive affective states, repetition in a state of relaxed release

allows the body to “make a match” and learn the skill. Through this process, the brain receives sensory feedback, which builds a “feel” for doing that allows the individual to release conscious control over muscle function, meaning motor skills develop to a level where they respond consistently and efficiently to an auralization of sound.

Kagarice defines the emotional aspects of performance as being able to “access the thoughts and feelings about oneself and others (humanity) and be[ing] open and able to communicate.” (Appendix H) This statement points to two facets of this domain. First, positive affective states are important for expressive, artistic reasons. The individual must feel confident in expressing their own ideas and feelings and be equipped to take these feelings, which essentially amount to a belief that one can effectively act on the world (feelings of self-efficacy), into their own practice. Secondly, emotions dictate whether or not intellectual or physical capacities will function efficiently. If there is emotional turmoil, such as fear, the individual will be unlikely to focus or act; therefore, the lesson environment must be a place of safety.

These domains are dynamic and interdependent in that they must be in balance throughout the learning process for any composite skill (holon) to be effectively learned or applied to the totality of musical expression. Table 11 shows how the three domains interact within several important learning targets for brass players. For example, in order to blow, the player must understand the purpose of the activity so that they are equipped to focus attention consistently on function, or the outward flow of air. At the same time, there must be *good energy flow*, meaning the individual must be comfortable letting go of control over musculature and letting their air go. Lastly, at the physical level, there must

be a state of release so that the body is in a position to realize the emotional and intellectual goals.

Together, these capacities interact over time to build the skills and mind-sets required for physical efficiency and creative expression through the art form of music however, this process is not prescriptive or standardized because students will not require the same *types* of interventions in order to progress. An advanced player who already blows and resonates well may benefit most from collaborative work in the area of musical concept, as evidenced in Josh's lesson. Conversely, Andrew is a younger student in need of additional emotional support, so his lesson was focused on a rapport mode. In the case of Aaron, the musical concept was strong, but the physical domain needed support in the area of releasing, so his lesson targeted a training phase.

Table 11: Three Domains in Several Issues Relevant to Brass Playing

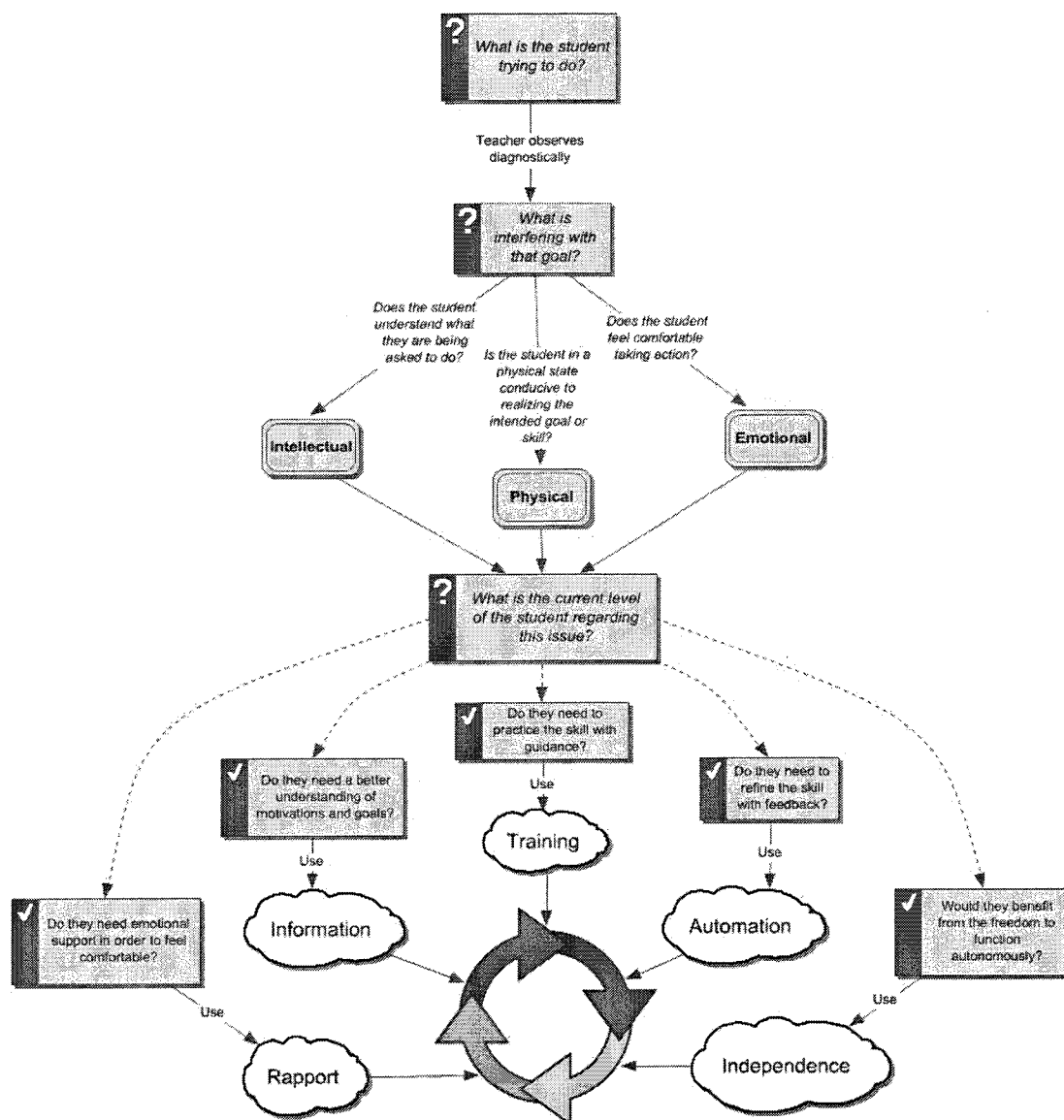
GOAL	Intellectual	Emotional	Physical
<i>Blowing</i>	Understanding of the concept/Focus of attention to outward flow of air	Ability to let go of physical control; open to change	State of release so that air can move
<i>Resonance</i>	Focus of attention to balance point in the instrument	Trust in the method; "moving air without 'doing'"	Developing a "feel" for playing; sensory awareness
<i>Playing from musical concept</i>	Focus of attention to a well-defined internal musical concept	Ability to express emotions/communicate through music	Automation; "air becomes sound"

In order to arrive at the instructional target at a given moment within the lesson, meaning in order to diagnose the location of and proceed from the ZPD, Kagarice

appears to superimpose her ability to hone in on the *blockage* or *imbalance* over the pacing of her five phase instructional model. Once she determines what area needs to be supported, she gauges where the learner is within that skill set. If more information is needed, she moves to an instructional mode. If the student understands what is expected, but needs more time to practicing implementing the skill under guidance, Kagarice uses a training mode. Similarly, if the student does not feel comfortable acting, she will target rapport.

Figure 9 presents a model, or flow chart, for tracking this type of strategic diagnosis of the types of interventions and activities will be most helpful for the learner. In a general sense, this can be described as a holistic approach to accessing the ZPD. Kagarice takes into account all aspects of the learner's need, meaning she both targets their current skill level and creates a learning modality which is best suited to incrementally building on that capacity so that learning is continually empowering and *safe*.

Figure 9: Teacher Diagnostic Flow Chart



Finding #5: Unified Function

If musical instruction is viewed in terms of a holistic, inter-related skill-set, meaning concepts are revisited as the student matures (*spiral model*), then measuring progress is challenging because improvement does not always materialize through external changes, but may take place only within the cognitive or affective state of the

individual. Given this, how is development assessed? What types of behaviors, skills, and attitudes characterize beginning, intermediate, and advanced levels of study?

While there is not a model within the existing body of literature on brass pedagogy, applied instruction, or Montessorial perspectives which can accurately codify Kagarice's holistic approach to instruction, *learning taxonomies* have been used within the educational community at-large to "identify outcomes of learning with which students could demonstrate that they had been changed by the educational process." (Bloom, 1954) This perspective is helpful in that it organizes and orders the capacities which we can expect to emerge in students as they successfully navigate a dynamic learning paradigm. Dettmer (2006, p. 74) defines learning taxonomies this way:

A taxonomy is a set of classifications ordered and arranged on the basis of a principle or a consistent set of principles. Well-constructed taxonomies have predictive value and organizational usefulness.

Traditionally, taxonomies have addressed the cognitive, affective, and psychomotor facets of learning. The concept was first generated by Benjamin Bloom and a group of his colleagues in 1954 with the aim of constructing a map to codify the "organization and interrelation of the various parts" of the learning process, and to "provide classification of the goals of our educational system" (Bloom, 1954). These educators were motivated by the assertion that "it seems very clear that each person responds as a 'total organism' or a 'whole being'" and the question of "whether human beings ever think without feeling, or act without thinking" (Bloom, 1964, p. 7).

Bloom and his colleagues first created a cognitive taxonomy using six classifications of learning: knowledge (recall information), comprehension (understand

information), application (use concept in a situation other than where it was originally learned), analysis (information can be separated into its component parts), synthesis (information can be reconstructed in different ways to build something new), and evaluation (rate the efficacy of ideas or information). Collectively, these capacities are described as a “classification of the student behaviors which represent the intended outcomes of the educational process” (Bloom, 1954, p. 11).

The affective domain, or “objectives which emphasize a feeling tone, an emotion, or a degree of acceptance or rejection,” (Bloom, 1964, p. 7) was later added. The five classifications are: receiving (awareness; ability to pay attention), responding (participating in the experience), valuing (the assignment of worth or value), organization (creating a value system), and characterization by a value or value complex (value system emerges in behaviors).

Bloom also recognized a psychomotor domain, which was described as any act requiring “neuromuscular coordination,” but no taxonomy was constructed by his group. This gap was later filled by a number of other researchers, most notably Harrow (1972), who classified psychomotor objectives into perception (awareness of sensory cues to guide motor activity), set (ability to act), guided response (imitation, trial and error), mechanism (intermediate step in which muscle memory begins), complex overt response (automation), adaption (movements can adjust to changing circumstances), and origination (creating new movements to meet a need).

Dettmer (2006) expanded this construct to include a social domain, which she categorizes as a “hidden curriculum” in that it is not directly addressed in instructional

settings, but continuously provides “an essential area for learning, doing, and practicing behaviors” within all “sociocultural interactions in school classrooms and school related settings.” Dettmer outlined eight classifications of socialization, which are: relate (awareness of others), communicate (expressing oneself), participate (engage with the environment), negotiate (adapt to the needs of a group), adjudicate (value judgments to strengthen the group), collaborate (work with others), initiate (be the originator of collective action), and convert (facilitate change in the social dynamic).

Table 12: Summary of Existing Learning Taxonomies

<i>Cognitive</i> (Bloom, 1954)	<i>Affective</i> (Bloom, 1964)	<i>Psychomotor</i> (Harrow, 1972)	<i>Social</i> (Dettmer, 2006)
Evaluation Synthesis Analysis Application Comprehension Knowledge	Characterization Organization Valuing Responding Receiving	Origination Set Guided response Mechanism Complex overt response Adaptation Origination	Convert Initiate Collaborate Adjudicate Negotiate Participate Communicate Relate

The performance of music, particularly as Kagarice imagines and teaches it, requires synthesis of all four domains. In order to implement her value system, which is summarized through the holarchies for applied instruction, improvement and progress must balance thinking, feeling, and doing within the context of a cooperative social environment; therefore, there are composite skill sets within each domain that must be developed parallel to one another. For example, a player functioning at the evaluative level (cognitive) is capable of rating the efficacy of information as it pertains to his/her own practice. In order to do this, the individual is also applying value judgments to the information (affective – characterization) based upon their own experiences using it

(psychomotor - origination) through either positive or negative performance experiences (social – convert); therefore, musical independence, or artistry, is a comprehensive skill set.

Table 13: A Summary of Learning Outcomes in Brass Playing by Domain

DOMAIN	LEARNING TARGETS
<i>Intellectual</i>	<i>Musical Concept Theoretical/ Musicological knowledge; Ear training; Understanding of process/method; Ability to focus attention; Setting goals</i>
<i>Physical</i>	<i>Blowing Resonance Balance; Body “makes a match”; Awareness/ Proprioception; Developing a “feel” for efficient playing</i>
<i>Emotional</i>	<i>Willingness to learn; Feelings of safety/ self-efficacy; Artistic voice/ Individuality, expression; Motivation; Performer’s mindset</i>
<i>Social</i>	<i>Belonging to a group/community; Context; Engaging in the environment; Working cooperatively with others; Performing</i>
<i>Unified Function</i>	<i>Holistically engaging intellectual, emotional, and physical capacities within a social context for the purpose of communicating musical thoughts.</i>

Dettmer (2006) uses the descriptor *unified function* to characterize encounters which merge the four domains and further identifies several potential benefits of structuring learning in this way. First, integrative experiences are more detailed and lasting than can be achieved through any one domain acting alone, so engaging the student on multiple levels has the potential to be more meaningful and transformative. Second, unified function brings the individual into balance so that they understand what

is expected, feel comfortable taking action, are in a physical state conducive to realizing their goals, and possess the skills to actualize their ideas within the social sphere. As Kagarice's asserts, physical problems are not isolated events, but the "manifestation of emotional and mental turmoil." Lastly, if the goal of instruction is to train individuals to function creatively, the student must practice engaging all of the capacities required for that outcome. The fully actualized artist thinks, hears, feels, and interprets as an individual for the purpose of originating and communicating unique musical thoughts through public performance; therefore, instruction should integrate those skill-sets. Table 13 provides a summary of the learning targets for each domain.

Dettmer also suggests three categories, *basic*, *applied*, and *ideational*, as a means to categorize progress within the learning experience. At the *basic* level, "teachers teach and learners master the material," meaning instruction is essentially the same for everyone. There is a consistent body of pre-defined information that all students must absorb. This is roughly equivalent to Kagarice's *information* mode in that it is didactic. At the *applied* level, "teachers guide and learners grow." Like Kagarice's *training* mode, lessons are tailored to the unique needs of the individual as learners are given time to implement what they know in a way that reflects their own goals and interests. Over time, as motor skill *automation* develops and the student takes on greater autonomy, they enter an *ideational* stage where "educators facilitate, learners generate," meaning the student is equipped to act creatively using the knowledge and skills they have gained. This mirrors *independence*, or the fifth instructional mode observed in Kagarice's lessons.

Viewing Jan Kagarice's pedagogy from this perspective, the researcher asked the question: At each level of instruction, *what should learners be able to do?* From this inquiry, a comprehensive taxonomy of integrated applied brass instruction was generated (Figure 10). Given that Jan Kagarice practices a holistic approach, the aim is not to limit learning to a categorical or hierarchical progression of events; rather, the purpose is to provide teachers with a guide for mapping the types of actions and behaviors which might be observed through the learning process. Certainly, students can function at various levels simultaneously and particular skills or capacities sometimes develop out of order; however, this model is intended to provide teachers with a structural framework for initiating goal-oriented strategies aimed at guiding students through the five phase model. First, it is helpful to look at each domain individually.

Affective skills, which Kagarice addresses in the *rapport* phase and continues to integrate throughout the learning process, are developed in an ongoing way for the purpose of building musicians who are equipped to formulate original emotional ideas, will feel confident implementing them, and can withstand the pressures of performance. These skills develop through five target emotional states which repeat cyclically throughout instruction: *opening, receiving, sensing, responding, and expressing*. First, *opening* refers to the capacity of the learner to be receptive to new ideas and/or instruction. When this is established, they can *receive*, or observe and absorb external experiences or emotions (i.e. from the teacher or other players in an ensemble). From there, the individual is equipped to begin exploring their own affective imperatives, meaning they learn to *sense* what they are feeling. This allows them to *respond* to the

changing emotional needs of the music, and eventually, to *express* those ideas through performance.

The cognitive domain encompasses the information and understandings required for taking meaningful actions, the aural skills needed for directing performance through a conceptual approach, and the ability to focus attention on a desired learning goal and/or the musical phrase being performed. These capacities develop through the stages of *hearing, understanding, evaluating, directing, and applying*. First, *hearing*, is cultivated as the ability to become aware of the environment and the task at hand. This allows the student to receive and *understand* information, so that it can be *evaluated* through the lens of existing experiences, knowledge, and understanding. This allows the learner to *direct* mental focus to a desired outcome such that information is *applied* to the task at hand.

The motor skills and physiological states required for efficient, expressive performance are contained within the physical domain, where development progresses through *presenting, perceiving, acting, integrating, and originating*. Because instruction is tailored to the needs of the individual learner, students first *present* their current level of performance skills. From there, the teacher imparts targeted information which allows the learner to become aware of, or *perceive*, more accurately the sensory feedback which accompanies performance. By redirecting goals, or *acting* in a more targeted way, physical functioning progresses. Through an *integration* of motor skills and musical concept, physiology becomes a medium for realizing a targeted expressive idea. As this capacity develops, the body can generate new movements, or *originate*, as needed in

order to meet the demands of the phrase being performed, meaning motor skills are highly adaptable to changing musical goals.

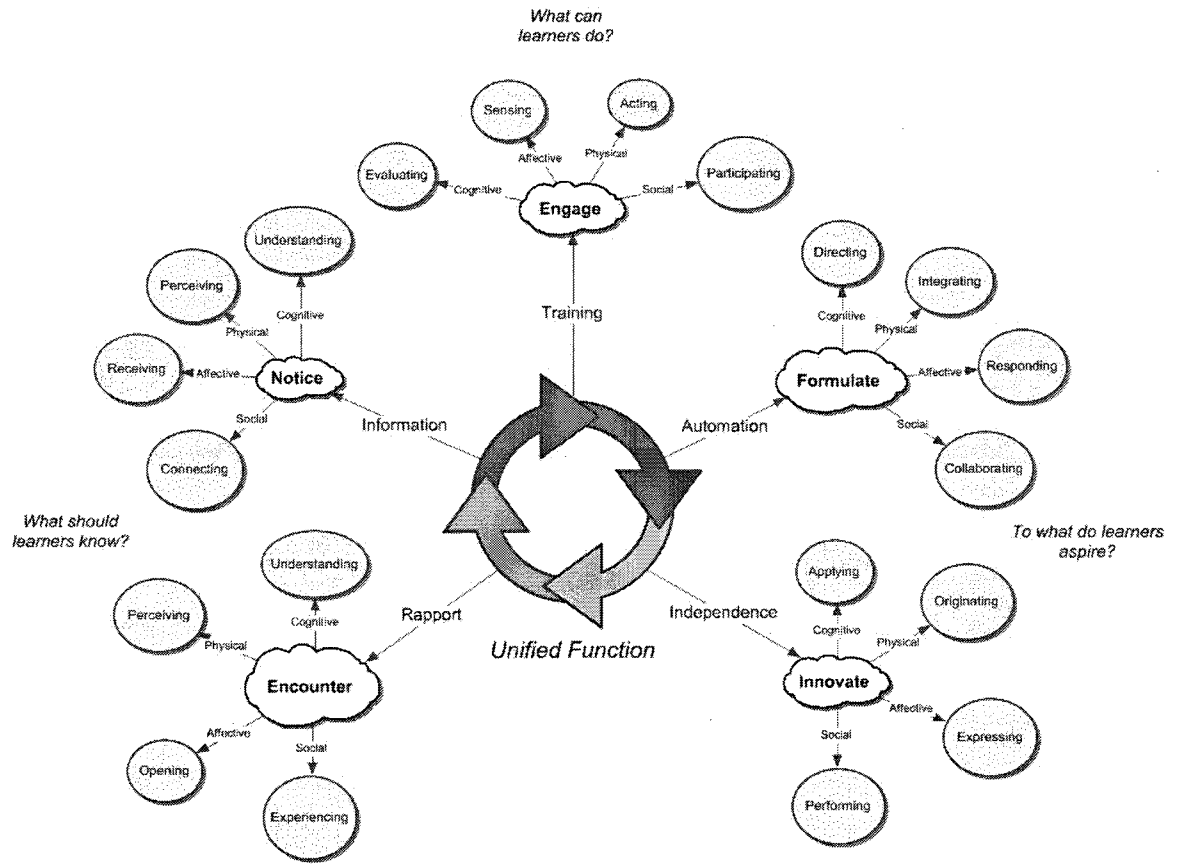
Because music is a communicative art form, all skills are actualized through the social domain, where learning moves through *experiencing, connecting, participating, collaborating, and performing*. The initial step is for the learner to *experience* the environment so that its parameters and expectations can be absorbed. From there, the individual makes *connections* to their own goals and aspirations so that an understanding of potentialities can be generated. This allows for authentic *participation* within the existing social structure. Once grounded in this way, *collaboration* with other musicians (or with the teacher) can be informed and fruitful such that *performance* integrates the player's own ideas with the scope and purpose of the performance and/or culture in which it takes place.

Unified function integrates these four domains such that learning targets engage the learner on multiple levels as they work progressively toward realizing the goal of communicating through the art form of music. Students *encounter, notice, engage, formulate, and innovate*. The initial *encounter* within the studio environment – conceptualized as a *rappport* phase – is characterized by making social connections, becoming open to instruction, acclimating to the setting, and presenting current skills or goals. During the *information* phase, learners engage and become aware of their own practices, experiences, and goals as they relate to the expectations of the environment, meaning they develop the capacity for awareness – *noticing* the parameters of their role in the process. At the *training* level, internal experiences and the external goals generated by the teacher are integrated as the learner connects ideas, emotions, and

understandings to the process of learning by doing. As physical skills become linked with cognitive understandings and affective states – characterized by the *automation* phase – the player *formulates* musical concepts and realizes them consistently through performance. This enables *innovation*, meaning the player can generate novel ideas and affective states and realize them consistently through performance in a social setting.

The benefit of *unified function* is simple: the student is trained for adaptability, which is the nature of musical performance. It is clear that not all learning encounters can or should be integrated in this way, because each domain represents distinctive skill sets which may need to be supported individually as the learner progresses; however, experiences which combine multiple capacities have the potential to generate meaningful, authentic encounters with the art form of musical expression which are reflective of the types of behaviors needed within the context of performance, thereby preparing the student to function actively and successfully within the field.

Figure 10: Unified Function



VI – SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The pedagogical practices of Jan Kagarice, Adjunct Professor of Trombone at the University of North Texas (Denton, Texas), have garnered significant attention within the field in recent years based on her known success rehabilitating players experiencing symptoms of the movement disorder *Focal Task Specific Embouchure Dystonia* (FTSED). In 2008, the *International Trombone Association* (ITA) recognized Kagarice with the prestigious *Neil Humfeld Award* for uniquely effective, innovative, and successful teaching. Her nomination originated with eminent trombonist Dennis Wick, ITA President and former principle trombonist with the London Symphony, who referred to Kagarice's work as "groundbreaking," and reported that she had facilitated in the rehabilitation of over 100 players diagnosed with FTSED. Her approach may also inform effective teaching strategies for healthy players, as it has been theorized that embouchure dystonia is a byproduct of certain pedagogical practices (Fletcher, 2008).

Although the field is in agreement that Jan Kagarice's work as a teacher is both innovative and successful, little is known or understood regarding the specific practices or attitudes which define her approach; therefore, the purpose of this study is to investigate and document her pedagogical techniques for the purpose of constructing and codifying a cohesive framework for effective teaching which can serve as an exemplar to the community of brass (and music) teaching at-large.

Based on a preliminary study during which the researcher took applied trombone lessons (at the doctoral level) with Kagarice, a three-part conceptual framework for

analyzing her practices was generated. Specifically, general educational theories in the field applied instruction, Montessori teaching philosophies, and practices and methodologies relevant to brass teaching and performance were reviewed.

Data were gathered over three site visits, spanning a period from September 2009 to March 2010, during which the researcher observed and recorded lessons and conducted interviews with both the primary (Jan Kagarice) and secondary subjects (students). In addition, relevant artifacts, such as course handouts, were also collected. During the data collection phase, the researcher determined that the parameters of Kagarice's rehabilitative practices with FTSED suffers is too complex to be accurately addressed within the scope of this project; therefore, the purpose of the study was limited to codifying her approach to working with healthy players.

Emergent themes were organized around three broad topic areas: the social dynamics and expectations of the studio environment relative to the larger context of the UNT College of Music, the theoretical belief system which guides Jan Kagarice's method and is in turn interpreted and implemented by her students (collectively referred to as a *shared value system*), and an overview of five instructional phases or modes (*rapport*, *information*, *training*, *automation*, and *independence*) which were regularly observed within lessons.

The participants in this setting function within a large and diverse state university environment characterized by a long history of high-profile national and international successes. Within this larger context, the members of Kagarice's studio are unified by a strong and supportive group dynamic which is fostered by the instructor and maintained

by students. Because both teacher and student function from the standpoint of a strong group identity, and an understanding of this value system is required in order to decode the significance and scope of the actions undertaken within lessons.

The shared value system has eleven components. Of these, four appear to be structural (*the “why” determines the “what,” music is a communicative art form, functioning independently, and balancing physical, mental, and emotional capacities through the learning process*), in that they are overarching themes which influence the purpose or intent of several other topics, five function in a more supportive role (*rapport, safety, focus of attention, form follows function, and balance and resonance*), because they are targeted at specific learning outcomes, and two are supplemental (*expanding what works and technique is a process*) in that they are prevailing attitudes, rather than specific behaviors or practices.

Based on emergent themes, the researcher outlined five instructional models as a means to organize findings around common ideas and to provide a roadmap for the field at large to codify and generalize the practices inherent to Kagarice’s approach. They are: a holarchy for applied instruction in music, a combination of sensory and conceptual methods for brass players, micro and macro pacing, a holistic model for accessing Vygotsky’s *Zone of Proximal Development* in the applied music setting, and an overview of *Unified Function* as it relates to Dettmer’s (2006) definition of that concept.

The five findings of this study reveal an integrated pedagogical process which stresses personal expression, balance, positivity, and mindfulness as a means to generate

technique and discover artistry, rather than the acquisition of technique as a vehicle for allowing creativity to take place. As Kagarice asserts:

In the United States, we often use music to teach people how to play an instrument vs. the player learns how to play the instrument by focusing on the music, as in the brass band tradition (Kagarice, 2008, p. 64).

From her perspective, expression comes first. Music is a communicative art form, and because the goal of instruction is to produce performers, teaching strategies must consistently place the student in a mental, emotional, and physical state of generating and imparting original musical ideas.

This integrated approach generates a *holarchy* for applied instruction which views the composite facets of efficient performance as both whole and part of the totality of musical expression. While particular skill-sets must be learned progressively and incrementally, no capacity is isolated from its purpose or context; instead, the acquisition of technique is a process of connecting existing knowledge to new ideas such that perspectives evolve as the student's understanding expands to include more details.

A holarchy is a hierarchical table of inter-related goals which collectively function as a whole. In Kagarice's case, that *whole* is the communicative nature of music. Based on this, the smallest of details, such as learning to hear different timbres or distinguishing a *legato* from a *tenuto* articulation, contains within it elements of the overarching imperative. Different tone qualities communicate different ideas. Instructionally, students learn technique by connecting aurally and conceptually with what they are trying to express or convey through that skill. Technique is the means by which ideas are imparted through sound, not an end in and of itself.

This allows Kagarice's strategies to coalesce under a common learning goal; namely, the production of fully actualized artists capable of directing their own careers and contributing to the overall advancement of culture through the medium of musical expression. Again, this brings the composite skills sets which form the learning targets of day-to-day instruction into a larger context. Students can envision the part they have to play within the public sphere. They see themselves functioning autonomously and eventually realize those goals within their own practice.

Because these goals are pursued within the context of brass playing, there are some aspects of instruction which directly target motor function as it is practiced on these instruments. Specifically, Kagarice combines sensory and conceptual strategies which can be traced back to several notable pedagogues in the field, namely, Arnold Jacobs (conceptual) and Don Jacoby (sensory); however, her ordering of these methodologies is worth noting, especially in terms of her emphasis on balancing intellectual, emotional, and physical capacities through the learning process.

Arnold Jacobs referred to his approach using the phrase *Song and Wind*. He advocated the teaching of technique and expression through the clear internalization of sound, or *song*. Skills are then realized through *wind*, or feeding that inner concept with air. This prompted him to practice a teaching model characterized by demonstration from the teacher, and a process of learning by *doing* through repetition, trial and error on the part of the student. Jacobs also eschewed the idea of playing by "feel," because he equated that idea with the physiological directives of the behaviorist teachers who were actively publishing their methods during the formative years of his own teaching career.

At the same time, Jacobs emphasized efficient respiration for the purpose of maximizing air capacity in order to fuel the sound with *wind*.

By contrast, Kagarice trains motor function through the fundamental premise of *form follows function*, which is a sensory-driven method for guiding the student to become aware of the subtle shifts in resistance and air pressure in the instrument as attention is focused on the outward flow of air, or *blowing*. As this develops, the player learns to sense resonance such that the experience of moving air becomes equated with tone production. As Kagarice says, “air becomes sound.” In order for this process to be effective, the learner must synthesize an active physical state of *doing* with positive affective states and an alert, goal-oriented mindset which targets function, or the outward flow of air (and later, musical ideas). In short, it is an integrated, holistic process.

Like Jacobs, Kagarice’s ultimate goal is to automate motor function so that the player can focus on an internal musical concept and the motor skills required to realize it are a part of muscle memory. In this state, the player does not have to devote mental energy to figuring out how to execute particular physical skills; instead, motor function is controlled on a subconscious level and the player initiates movements through an auralization of the musical phrase. For this reason, like Jacobs, much of Kagarice’s teaching is conceptually-based musical training.

Given these perspectives, Kagarice’s approach can be seen as bridging a significant schism in the field. Specifically, conceptually-based teachers have eschewed the notion of *feel* based on the fact that they did not want to teach embouchure formulation. Based on this perspective, the researcher deduces that students working

solely within this method can become somewhat anesthetized to the experience of connecting with the instrument; they remain fully intellectualized in terms of sound, while calling on affective states in order to express ideas musically. In this paradigm, the physical domain is largely bypassed.

By contrast, Kagarice's integrates *feel*, but she does not define this state according to the same terms as the conceptualists. To the extent that the player becomes aware of and learns to manipulate the sensory feedback of changing air pressures as they blow into the instrument, they can develop a *feel for doing*. This is sensed not in the muscles of the face, but in the experience of the airstream bumping into the resistance of the stationary air within the instrument. It is an awareness of the *feel for blowing*, rather than a sensing of the location and feel of the musculature itself.

In this way, Kagarice's method provides a means for getting to the fully conceptualized approach of Jacobs's *Song and Wind*. Through an awareness of feel, the player learns to connect an accurate auralization of tone with the experience of creating that sound, so that techniques can be replicated more reliably because the player has a physical context for them. The sensory aspects of Kagarice's teaching appear to be primarily a means to an end; meaning, a process for training the player to automate muscle function for the purpose of expressing an emotive phrase. In order for these skills to remain in place on the long term, they are continuously revisited and refined, as the player's musical concept evolves.

Because *technique is a process, rather than a set of skills*, progress in the learner can be tracked at both micro and macro levels. Understanding this pacing offers insight

in terms of how Kagarice applies the five phase instructional model for the purpose of reaching both sensory and conceptual goals. While students at all level experience all (or most) aspects of instruction within the context of a single lesson, the content, tone, and goals of each one are tailored to the needs and level of the individual.

For example, an older student who is already capable of functioning independently at the macro level, meaning she/he is applying the method to his/her own practice and/or teaching it to others, will continue to experience some aspects of the rapport, information, training, and automation modes at the micro level, or within the context of a single lesson. Kagarice continues to take advanced students through the process in order to generate new understandings or perspectives and reinforce positive mental, physical, and emotional habits; however, at this level, instruction is more dynamic, interactive, and collaborative while continuing to focus on the core aspects of her method.

By contrast, a younger student will likely be observed functioning within the earlier phases of instruction, such as rapport, information, or training, within the micro context of a single lesson, but may also be capable of exhibiting some overarching conceptual understandings or advanced skill-sets which function at the level of independence, thereby preparing the player to eventually act autonomously at the long-term, or macro level. This pacing is compared to the three-period lesson of Sequin and its relationship to the Montessori perspectives which related to Jan Kagarice's own educational training.

Because all students progress at a unique pace within this model, the teacher is responsible for diagnosing the individual's needs at a given moment within a lesson. This is conceptualized using Vygotsky's *Zone of Proximal Development* (ZPD), which refers to the ability of the teacher to gauge the student's current abilities and formulate a targeted path of progress which is designed to build incrementally on what the student already knows or does well. In addition to tailoring instruction to the unique needs of the learner, this assists in promoting positive affective states because the student is presented with challenges they can achieve.

Kagarice refers to this as "keeping it safe," meaning the learning process feels comfortable because it never takes the student outside of an instructional mode, or target zone, where they can progress successfully. Given Kagarice's emphasis on a holistic approach to learning, she hones in on the intersection between what the student wishes to accomplish and which aspect of their performance (cognitive, affective, or physical) is a source of interference to that goal. This is the means by which she charts daily instructional strategies and goals within lessons.

Kagarice practices a form of observation which is geared toward becoming attuned with the unique learning style and disposition of her student. This differs somewhat from conceptualizations within the field in that she stresses that her process is not a form of empathy (Gholson, 1993); in that, she specifically tries not to cycle her observations through her own thoughts in feelings. Instead, her practice is more akin to the ideal artistic mindset in which the viewer practices a state of heightened awareness or mindfulness which in turn generates more authentic and detailed observations. In short, it is a process of *noticing* what is happening with the student.

Based on the information she gathers in this respect, Kagarice chooses a learning domain to target. Is the impediment to the realization of the musical goal based on emotional, intellectual, or physiological issues? Does the student understand what they need to do? Do they need additional emotional support in order to feel comfortable acting? Do they need time practicing under guidance? The core diagnostic question is: *At this moment, what is the physical, mental, or emotional blockage that is preventing the student from realizing his/her goal?* By answering these inquiries, Kagarice is equipped to choose an instructional phase which is best suited to the needs of the learner at a given time. In this way, her pedagogy may inform practices within the larger field of applied teaching in music by offering a holistic model for accessing and building on the student's ZPD.

Because Kagarice's approach is holistic in nature, it can be difficult to understand and assess student progress and learning. If instruction targets three domains, physical, mental, and emotional, and provides a fourth domain, or a social context, for the purpose of actualizing, or performing, what types of developmental steps will students be expected to take? What types of capacities, skills, or behaviors would be exhibited by a basic, intermediate, or advanced learner?

To answer this question, the researcher has presented a model for *unified function*, based on Dettmer's (2006) application of Bloom's *Learning Taxonomies*. When learning taps all four domains (mental, emotional, physical, and social), the resulting experience is more dynamic and detailed than what can be achieved within any single domain acting alone; therefore, the encounter has the potential to be more meaningful and lasting.

This allows for the creation of broad learning outcomes to be expressed in terms of a unified function, or a holistic, integrated capacity which requires the individual to engage on multiple levels. From here, the composite skill-sets which contribute from each domain can also be mapped. The researcher then created five unified learning targets (encounter, notice, engage, formulate, innovate), each corresponding with the five phases of Kagarice's instructional approach. These are intended to assist teachers in generalizing Kagarice's methods to other instructional contexts, including non-brass teaching. These categories of learning track a progressive process for equipping the student to function independently which is conducive to learning on any instrument or voice.

Conclusions

Through a layered approach to analysis which addressed the context of applied instruction, the behaviors associated with constructivist, or Montessori teaching strategies, and the physiological issues associated with tone production on brass instruments, the social and pedagogical dynamics of Kagarice's teaching studio were coded and organized. The resulting data revealed five primary findings which were supported by interview transcripts, field notes, artifacts, videos, lesson transcripts, and student response forms. Topic areas related to each of the three research questions emerged; thereby generating a comprehensive framework of Jan Kagarice's teaching methods.

Research Question #1a (Finding #'s 1 and 2)

At the surface level – content – Jan Kagarice’s teaching methods are focused on training musicians in the physical and expressive skills required for performance on brass instruments. Although her ordering of the steps employed is unique to her approach, many of her practices can be directly linked to existing methods in the field. Specifically, she promotes resonant tone production using a form of sensory training similar to that of Jacoby (1990), Adam (1975), and Cramer (1985) and combines that with musical coaching in the tradition of *Song and Wind*. (Frederiksen, 1996b) In terms of practices which are unique to her method, Professor Kagarice does not advocate the teaching of *breathing*, as is described in virtually all pedagogical writings on brass, preferring instead to place primary focus on the outward flow of air, or *blowing*, given that tone production actually occurs during exhalation.

Jan Kagarice is also particularly adept at holding larger themes in place while working with the everyday, ongoing needs of the learner. Specifically, she maintains focus on the communicative aspects of music such that all technical demands are placed within the larger framework of artistic expression. This allows her to simultaneously teach in a way that honors both *whole* and *part*, meaning discrete musical elements or techniques are not only described and practiced in terms of their own distinct meaning and parameters, but are also integrated into the whole picture of the individual’s ability to employ those ideas to the expression of a musical product.

Instruction primarily centers on *goal-oriented actions*, rather than specific, targeted, drillable skills. Progress is facilitated through attentive thinking (*focus of*

attention), purposeful doing (*form follows function*), and emotional expression (*music as a communicative art form*). Because learning is undertaken as an internal, synergistic process of building cognitive, affective, and physical connections, students gain metacognitive skills – they understand how to learn and/or how to teach themselves – which has been identified as generating positive and effective practice skills (Barry & Hallam, 2002).

Self-directed learners capable of independently setting and reaching goals have also been targeted as a primary learning outcome within the constructivist school of thought (Loyens & Gijbels, 2008). Students also credit Jan Kagarice's emphasis on authentic connections with the art form with an increased desire to practice and improve their skills, meaning they display increased levels of intrinsic motivation (Bain, 2004). Learners are also optimistic about their ability to apply skills successfully, which is linked to increased feelings of self-efficacy (Artino, 2006), and credit an emphasis on musical expression with generating this affect. The model of a *holarchy* – an interdependent, hierarchical model of interrelated goals (Loubriel, 2006a) – was presented for the purpose of providing conceptual structure to the types of skill sets which Jan Kagarice targets within the context of integrating skills holistically.

Research Question #1b (Finding #3)

At the second level – behaviors – which is theoretical in nature and refers to the goals of Jan Kagarice's value system, the primary focus is to equip the student to function independently through directing activities to a pacing which combines micro (short-term) and macro (long-term) learning goals. Primarily, this appears to be an adaptation of the

scaffolding strategy *direction management* – the setting of long and short term goals (Kennell, 2002) – and the Montessori/Séguin *Three Period Lesson* (Montessori, 1912) to the context of applied instruction via a five phase instructional model which encompasses *rapport, instruction, training, automation, and independence*. The overarching goal of empowering the student to function independently has also been identified as a key indicator of student success within the constructivist school of thought (Loyens & Gijbels, 2008).

The most notable aspect of this process is that while the ultimate aim of instruction is for the player to function as a fully actualized artist, the learner is not released to act autonomously until they are equipped to do so successfully, meaning independence is a developmental process which proceeds incrementally under the guidance of the teacher. Like Montessori's *Three Period Lesson*, in order to accomplish this, Kagarice guides students through a process of awareness, naming, practice, recognition, and, ultimately, independence.

The first step (or pre-stage) is for the student to become aware of the environment so that they are equipped to notice what is happening there. This refers to Kagarice's *rapport* phase, in which she works to “draw the student forth” and bring them into the environment through positive social connections. From there, information is isolated and named, which parallels Jan Kagarice's practice of describing the *why*, or the reasoning and motivation, behind the process of taking action, or *what* is to be done and *how* those goals will be accomplished. Once informed, the student is equipped to practice implementing concepts, first under close guidance of the teaching, as in *training*, and later in a transitional stage, as they learn *automation* of motor skills and begin to gain

independence. From the process then emerges the overarching goal: the student can function autonomously.

This is seen at both the micro and macro levels in that it is not a linear developmental process of arriving at independence; instead, it is cyclical in nature. The student learns, practices, and masters composite concepts and skill sets, and then integrates them into the whole, or the *holarchy*, of inter-related goals. The learner is encouraged to function autonomously wherever they can, while continuing to be supported in those areas that have not yet developed to that level. Eventually, at the macro level, this process is cumulative; the player learns to formulate and act on their ideas, possesses the physical skills to realize them, and feels confident taking action to reach their goals.

Research Question #1c (Finding #4)

Within the social layer of this setting – context – where pedagogical aims interact with Jan Kagarice’s value system, the primary model employed is a holistic version of Vygotsky’s *Zone of Proximal Development*, a concept which roughly maps the intersection between what a teacher knows and how much of that information can be effectively absorbed by the student at a given moment. (Kennell, 1992) Empowering the learner to proceed into change and meet goals or challenges once they have been presented has been linked to both emotional and cognitive states. First, the learner must experience feelings of self-efficacy, meaning they believe their actions will be successful (Artino, 2006). This is a complex process, but has been linked to positive student-teacher rapport (Clemmons, 2007).

Given that the field in general has already conceptualized ZPD in terms of a holistic stance, meaning it is dependent on a variety of factors and not limited to knowledge transference, Kagarice's application of this model is significant in that her goal is to integrate a multi-faceted approach to learning into her diagnostic process. Specifically, she views the mental, physical, and emotional aspects of performance as working in balance, and ideally in synergy, meaning that improvement should be facilitated by addressing all three of these capacities within the individual.

Kagarice organizes learning around thinking, feeling, and doing, meaning the process for honing in on the student's ZPD is multi-faceted and addresses not only what the student knows, but what they can do, and how they appear to cope with the process emotionally. Based on this, the core diagnostic question is: *At this moment, what is the physical, mental, or emotional blockage that is preventing the student from realizing his/her goal?*

Kagarice uses this inquiry to gauge the level at which the student needs to be supported regarding a target emotional, mental, or physical issue, and then cross-references this with the five phase instructional model in order to choose a strategy. For example, does the student feel comfortable taking action regarding this issue? If not, the *rapport* phase can be employed to generate feelings of safety. By contrast, if the student appears to feel confident, but lacks sufficient information or metacognitive skills to take action, the *instructional* phase allows Kagarice to give additional context so that practice can be informed by a clearer understanding of the process. Collectively, this forms a holistic model for working with ZPD.

Research Question #2 (Finding #'s 1-4)

While there are many components of Jan Kagarice's value system and teaching method, they coalesce under the broad goal of *finding balance*, meaning the intellectual, emotional, and physical aspects of performance are integrated as a means of pursuing the overarching goal of building a fully actualized, independent musician. This concept describes the process through which Jan Kagarice practices a holistic teaching model. The strategies she employs, namely the use of metacognitive skills as a means to fuel musical communication and the advancement of culture, a combination of sensory and conceptual approaches to the physiology of brass playing, direction management and a combination of macro and micro pacing for the purpose of fostering independence, and the application of the five phases of instruction through a holistic model for accessing ZPD, form the structure of her method, and achieving balance is the underlying goal.

First, from a physical standpoint, students are guided through a process for finding form, rather than having the details dictated directly to them. This is described as an *automatic* learning mode, and had been targeted as promoting a state in which the performer is more equipped to focus on the intended musical goal, rather than the component movements required to realize it. (Verdolini, 2000) Specifically, learners are given time to come to a place of balance with the instrument.

Sensory strategies similar to those described by Jacoby (1990) are employed as a means for building awareness of sound and air flow such that efficiency develops out of a process of discovery. This appears to empower students to feel a sense of control so that practice is more productive and positive, an affect which is supported by the literature in

terms of the types of skills which student musicians need in order to be successful (Barry & Hallam, 2002).

The term which emerged to describe the physical state students experience under Jan Kagarice's guidance is *fluency*. When students experience physical skills which consistently realize the musical goal, the physiological aspects of performance are in balance. Within the related literature, this state is referred to as motor skill *automation*, meaning the physical skills associated with performance are refined to the extent that they are not under conscious control in the brain, but function as a learned response to musical thoughts. This state has been identified as highly desirable in terms of facilitating a technically consistent and musically expressive performance (Buck, 1944; Sloboda, 1985; Bloom, 1986; Frederiksen, 1996b; Verdolini, 2000; Barry & Hallam, 2002; Kutz, 2003).

Specifically, Kagarice trains form through a process of learning to focus attention on specific physical phenomena, such as the location of the *balance point* in the instrument. The ability to engage in focused concentration as been identified as an effective cognitive strategy which fosters productive practice (Barry & Hallam, 2002). This *focus of attention* strategy is also expanded to include all aspects of the music-making experience. The ability to consistently focus awareness on a given experience or phenomenon generates unique and original observations over time, and this has been described as fundamental to the artistic temperament (Berger, 1977; Kimmelman, 2005); therefore, Jan Kagarice fosters the *intuitive* aspects of expression through an authentic connection with the art form, which has been identified as an important aspect of training musical communication (Barry & Hallam, 2002).

The cognitive aspects of performance are also supported through a process of ear training, musical coaching, and expressive analysis which mirrors many aspects of Arnold Jacobs' *Song and Wind* (Frederiksen, 1996b) approach, meaning Jan Kagarice works to build clear musical thoughts and understandings within the student's mindset. Supporting practice with these types of activities has been shown to decrease the number of physical repetitions which are required in order to improve or master a concept or skill, meaning learning is more efficient (Barry & Hallam, 2002).

Jan Kagarice's practice of teaching the *why* behind the *what* also gives students metacognitive skills so that they understand the reasons for taking action, and gain an important context in terms being able to self-direct and accurately evaluate performance (Barry & Hallam, 2002). As students gain skills and build understandings, awareness of the *syntactic density* (Howard, 1971) of the musical language becomes more nuanced, detailed, and comprehensive and the ability to of the player to function independently through an intrinsic connection to the art form (Bain, 2004) is increased. In these ways, Jan Kagarice works to support attitudes which bring the intellectual aspects of performance into balance with expressive goals.

Lastly, the affective aspects of performance equip the student to feel comfortable taking action and therefore support the development of an independent artist. First, positive rapport, a factor which has been identified as contributing to confidence in the learner in an applied setting (Clemmons, 2007), is built and nurtured through a proactive mentorship from the teacher. This is the first instructional step in Kagarice's five phase model. Second, she describes creating feelings of *safety* around the learning process so that over time, the player learns to trust their skills. This is accomplished by building

incrementally on what the student already knows so that they *make a match* cognitively and feel confident using new information. This is directly related to Vygotsky's *Zone of Proximal Development*, as it has been applied to the field of studio instruction in music (Kennell, 2002). The use of proximal goals also generates feelings of *self-efficacy*, which have been targeted as an important aspect of equipping the learner to proceed into challenge (Artino, 2006).

In conclusion, given that the larger goal is to realize music as a communicative art form, players are trained in an artistic mindset, meaning they are encouraged to become more aware of, or notice more readily, the nuances of the musical language as a means to conceive of and impart original thoughts through sound. In order to accomplish this, players must have a cognitive understanding of form, structure, style, phrasing, and notation, all of which is seen as contributing to effective practice and progress. They need metacognitive skills in order to accurately assess their performance and chart a path for improvement (Barry & Hallam, 2002). In terms of affective states, they must feel comfortable taking action, which grows out of intrinsic motivation (Bain, 2004), positive rapport (Clemmons, 2007), and feelings of self-efficacy (Artino, 2006). Lastly, a physical state conducive to realizing the goal must be cultivated such that motor skill learning develops to a state of *automation* (Buck, 1944; Sloboda, 1985; Bloom, 1986; Frederiksen, 1996b; Verdolini, 2000; Barry & Hallam, 2002; Kutz, 2003).

Research Question #3 (Finding #5)

Given that Jan Kagarice's approach to applied musical instruction is holistic in nature, and the values which she imparts to her students are multi-faceted, the most informative model for the field at-large is a map which charts the types of goals and

behaviors that can be observed at various stages of her students' developmental process. This synthesizes broad learning targets into an organized framework which not only provides structure for her pedagogy, but generates meaningful grist for the field at large in terms of facilitating discussion regarding the types of strategies which can lead to the outcomes displayed by Kagarice's students.

To provide structure for this concept, the researcher employed the long-standing model of learning taxonomies which was initially introduced by Benjamin Bloom (1964) and adapted the current topic to contemporary dialogue on this subject (Dettmer, 2006). Specifically, *unified function*, or a model which synthesizes the four learning domains (cognitive, affective, physical, and social), presents an apt framework for organizing Jan Kagarice's learning goals into a usable, and potentially generalizable, model for the field at-large.

Four broad goals, *focusing*, *realizing*, *communicating* and *actualizing*, are organized around a progressive, hierarchal learning structure over which Jan Kagarice's five phase instructional model (*rapport*, *instruction*, *training*, *automation*, and *independence*) is superimposed for the purpose of fostering and tracking *basic* ("What do learners know?"), *applied* ("What can learners do?"), and *ideational* ("To what do learners aspire?") learning modes.

One of the defining qualities of *unified function* is its social component, which is particularly relevant to music-learning, given that performance requires the wherewithal to function effectively and confidently within the public sphere. Kagarice's studio is uniquely equipped in this respect. She consistently fosters an open, social atmosphere in

which students learn as a group and collaborate both with her and with each other, while at the same time working to reach goals independently. This is particularly relevant in reference to *private* instruction in music, because traditionally, learners in this context are isolated from one another through the one-on-one nature of studio teaching. The communal atmosphere fostered by Jan Kagarice may serve as an alternative model of applied instruction which has the potential to generate important social skills relevant to musical performance.

Implications for Teachers of Applied Music

Given the emergence of maladaptive states, such as FTSED in recent years, brass teaching may be due for a refocus in terms of training players to develop healthy function and an expressive mindset. This study endeavored to shed some light on that issue and offer suggestions for bridging the gap between teaching and *doing* within our field. As evidenced in the literature review of this paper, for the last fifty years, the field of brass teaching in general has equated the physiological aspects of performance with “pedagogy.” The skill-sets and capacities which are observed or assumed to be present in master players have been presented as the method by which learners are taught. Unfortunately, the field is characterized by a preponderance of information, much of which is in direct conflict; therefore, it is very difficult for a young player to ascertain exactly what their learning goals should be.

By contrast, a more socially common definition of *pedagogy* (as evidenced by a current *Wikipedia* entry), “is the study of being a teacher or the process of teaching” (Wikipedia, 2011). As Kagarice says, “physiology is not pedagogy.” It is the *process* of

teaching that is most significant in terms of what can be gleaned from a comprehensive study of her methods. Further, the *process* by which teachers in an applied music setting facilitate change in learners has been targeted as an important point of inquiry for the field at-large (Duke & Simmons, 2006). From this perspective, the details of technical form or physical functioning are less relevant than the experience each player undertakes in order to arrive at efficiency and balance.

Firstly, at every level of the process, Kagarice's approach asks the question, *Why are we learning?* The answer to this inquiry is the means by which she links physical skills with expressive purpose, and this connection brings meaning to the process. Instruction is not a list of esoteric techniques which are instilled on the learner; rather, technique is always placed within the context of the greater picture. For example, *why are we learning to articulate this way?* Because in a Baroque style, eighth notes *sound like* this: the student sees, hears, experiences, and expresses. They learn the context of stylistic features and gain understanding about expressive nuances. Their voice is connected to the language of music and joins in the community of expression as it has been practiced for hundreds of years.

From this perspective, Kagarice teaches from the *gestalt* nature of music, meaning she highlights the prevailing and fundamental truths, such as personal expression, which define and shape the details of the art form. Well known pedagogue Parker Palmer (1998, p. 123) describes this type of stance:

Each discipline has an inner logic so profound that every critical piece of it contains the information necessary to reconstruct the whole.

This “inner logic,” which Kagarice conceptualizes as the communicative power of music, serves as a map for guiding our choices and strategies within teaching contexts. From Kagarice’s perspective, music is an integrated discipline, meaning no single skill-set should be taught in a way that cuts off its meaning from the totality of the whole.

Palmer also likens this to an analogy with the nature of a holographic image, which is a composite of many whole-parts, meaning each layer is a smaller version of the full image. Singly, these images contain all the truth of the full picture. Collectively, they merge together in a complimentary fashion to create depth and perspective. This “holographic logic,” or the order which emerges from the prevailing and interlocking themes that define and shape knowledge, is an optimum learning perspective. Rather than functioning as a dispenser of knowledge, the teacher exposes the student to the “community of truth” as it is practiced and understood by the field as a whole. Through authentic encounters with the art form, students learn overarching concepts which they can then meaningfully connect to the information requisite for expert functioning within the field.

Jan Kagarice is a practitioner of *holographic logic*. One of the defining aspects of her method is that it has strong internal integrity. No matter how it is deconstructed, complimentary themes and interconnected meanings emerge. Through exposure to these connections, students build a framework for understanding artistic expression through their own world view, rather than having the nuances of the expressive language dictated to them.

Primarily, Kagarice addresses the needs of the learner as a whole person. What does the student need in order to be successful at this moment? This is a powerful question in that it equips teachers to look for the *simplest* answer, rather than the most *obvious*. Physical issues can be directly observed, so as a teacher, it is both tempting and easy to see what isn't working and tell the student to change it; however, actions are always linked to thinking and feeling, so this type of strategy does little to assist progress in the long run. If the student doesn't understand what they are doing or doesn't feel confident making change, the undesirable physical symptom will simply reassert itself; therefore, the *simplest* answer is one which meets the student's needs in terms of overall learning, not the one which presents as most obvious.

From this perspective, teaching is nuanced and intuitive in that the teacher must learn to pick up on subtle social cues and hone in on what is actually happening, rather than what appears to be happening. Improvements in sound are not always indicative of clearer thoughts or more positive affective states. Sometimes an improvement in sound is just a fluke, or possibly the result of old (but inefficient) habits reasserting themselves as the individual attempts to progress through change. It is the role of the teacher to be able to diagnose what is going on, to be able to determine when and how improvement actually is improvement, meaning the player's understanding, feeling, and doing is in balance with the musical goal.

In this way, teaching is an art form, and from Kagarice's perspective, it can be learned. Just as the student practices a state of heightened awareness and thereby learns to *notice* more than the casual observer about the nuances of musical expression, so too does the teacher become equipped to *notice* more about human behavior and reactions. It

is in the *asking* of the core question (*What does the student need in this moment?*) that generates a mindset conducive to learning how to read students in this way. As the teacher makes relevant diagnosis and takes action to support the student, she learns too. She notices how individuals react, what helps them, what empowers them, and what success looks and sounds like. Over time, this generates a capacity for diagnostic observation with the teacher.

Specifically, by opening the door to integrating thinking, feeling, and doing the answers can reside someplace else besides technique. It isn't just about what can be observed visually, but what can be sensed through listening, feeling, and inferring on the part of the teacher. Is the player confident? Do they feel comfortable expressing themselves? Do they understand what they are being asked to do? Observing the student in this way is intuitive and requires practice, but entering into this type of dialogue positions the teacher to learn about how students learn, and in so doing, to become increasingly adept at detecting intellectual and emotional blockages within the player.

Given these insights, and in drawing the five primary findings of this study together, how do we proceed as a discipline? Firstly, it appears clear that brass players would benefit from a more holistic stance in terms of pedagogical practices. There is no single physical action, muscular configuration, or skill-set which will work equally well for all players; therefore, a pedagogy which targets broad goals and honors the individual's need to learn by doing allows students to develop form which works well for *them*, rather than what may appear to conform to pre-set standards. As both Kagarice and her students assert, *technique is a process, rather than a set of skills*. The application of this perspective alone appears more likely to produce usable, reliable motor skills

conducive to a lifetime of healthy performance than does a pre-determined expectation of embouchure formulation.

Second, the purpose of instruction is to train performers and contribute to the advancement of culture in the long term, so teaching strategies must target the mental, emotional, and physical states which are conducive to communicating musical thoughts, while providing students with a clear process for arriving at those goals. This means that actions and skills are linked to meaning and purpose in terms of the musical language. No technique is separated from the whole. Palmer (1998) refers to this approach as honoring both the “stuff” (what we have to know and understand) and the “space” (the experience of learning) of teaching. It is about giving students the tools to function independent, while realizing that the process of arriving at that goal requires support and guidance.

Lastly, and perhaps most importantly, Kagarice’s model may rightly re-imagine the way we define the very idea of *technique*. Because learning is comprehensive and holistic, with no skill-set being separated from the totality of the whole, the ability to *adapt* to musical challenge, rather than the facility to *execute* discrete and separate technical drills, defines the master performer. Technique is dynamic and variable, not defined, finite, and standardized. The goal is to build a cooperative cognitive, physical, and affective state in which the body can consistently and efficiently realize the musical thoughts of the player. This is done conceptually, through progressive musical challenges that are linked to the greater purpose of expressing musical thoughts. At the highest level, motor function is not a set of prescribed movements or actions, but a state

in which movement is intrinsically linked to expressive imperatives, and the body can originate new movements as needed to execute the needs of a given musical phrase.

This is revolutionary in terms of how skills could be taught. Whereas current models tend to focus on the repetition of scales, arpeggios, high register studies, lip slurs and the like, if technique is regarded not as a list of executable tasks, but a capacity for adaptability, then technical training can be musically-based, which has the potential to engage the learner on an imaginative and creative level and generate greater enjoyment and motivation through the process. This is certainly not to imply that standards should be lowered and students should *not* be taught to perform at a technically advanced level. On the contrary, if motor skills are learned in terms of their link to musical style, context, and expression, rather than uniformity of drillable patterns, technique has the potential to extend beyond the boundaries presented by commonly applied methods. The potential for performance is only limited by the player's ability to conceive of and accurately auralize possibilities.

Ideally, the researcher hopes that the conclusions presented in this paper will facilitate some level of evolution or change within the field at-large. Training brass players as musicians is congruous with the expressive aims of musical instruction, but has not been a priority within our discipline, at least not in so far as brass instruction has been both experienced and codified by the author of this paper, herself a well-trained and experienced trombone player.

In addition, we have come to an impasse where the establish methods are being thrown into question based on the increasing incidence of injury and maladaptive

conditions such as FTSED. A pedagogical approach such as the method outlined has the potential to bring players into a state of mental, physical, and emotional balance which is far more conducive to long term health because it emphasizes expression over technique, and brings into focus our core reason for pursuing learning on our instruments: to function as musicians and communicate as artists.

Recommendations for Further Research

This study raises some important implications in terms of the field of brass instruction and the greater context of applied teaching in music; however, there are a number of issues which emerged in this context, but could not be meaningfully addressed within the scope of this paper. These are suggested to the field at-large as areas ripe for further research which could promise important insights in the future.

First, and potentially most significantly, this study was unable to address Kagarice's work as a rehabilitator of players working through symptoms of FTSED. The decision not to include this aspect of her teaching was made based upon the high level of emotional implications for learners challenged by maladaptive physical states. As evidenced by this paper, Kagarice's standard pedagogical approach is complex and dynamic. Based on what the researcher was able to ascertain through the limited observations of FTSED clients that became available during period of this study, her approach to working with these players appears even more nuanced and varied than her standard approach. Following the data collection phase, the researcher determined that it would be more helpful for the field to begin with a thorough documentation of Kagarice's

basic methods, with the hope that further research into her FTSED therapies could be gleaned from future studies.

There are also compelling aspects of this study which relate more to the general context of applied teaching at-large. For example, Kagarice's students report that they regularly reach a state of *flow*, both in lessons and performances, and directly credit her method with equipping them to both understand and access this state. Although there are a number of existing studies on flow which rely on self-reporting as the primary assessment instrument, the scope of this project did not allow ample time or space for understanding how flow functions for these students; therefore, a more thorough investigation of this topic, as it appears within this context and is or is not connected directly or indirectly to the specific teaching strategies Kagarice employs, would be a compelling inquiry for the field at-large.

In a similar vein, student responses appear to support the notion that Jan Kagarice's approach generates both feelings of self-efficacy (Artino, 2006) and intrinsic motivation (Bain, 2004); however, the specific activities or strategies which contribute directly to these positive states cannot be isolated within the scope of this project. Future inquiries which target these facets of the learning process could uncover more clear-cut relationships between instructional practices and positive affective states in learners within an applied music context.

Given students' assertion that they feel more confident and artistically independent after studying with Kagarice, there are also some areas of ambiguity which emerge from the contemporary dialogue on teaching adult learners. The field at-large

contends that critical thinking is most effectively fostered through the use of challenging questions intended to spark contemplation of difficult issues and problematic, complex subject areas (Brookfield, 1987; 1990; Greene, 1995; Palmer, 1998); therefore, how do the aspects of Jan Kagarice's teaching which focus on *safety*, such as is in the *Montessori question* – a form of inquiry which is intended to affirm the learner's existing knowledge and guarantee a "correct" response – directly facilitate learner autonomy? Although students visibly display moments of independence, to what extent are these thoughts and actions derived from critical thinking and how/when do individuals move from feelings of *safety* to feelings of self-actualization? Additional exploration of this topic within this or a similar context would be helpful in illuminating a balance between teacher intervention and learner autonomy within the applied music studio.

Given that this study was only able to address the understandings and short-term progress of a select number of secondary subjects, issues such as learner autonomy might be better gauged through a longitudinal study. The sample of Jan Kagarice's students who were observed and interviewed for this project uniformly and enthusiastically endorsed her approach and consistently credited her with not only improving their physical relationship to the instrument, but empowering them to act expressively and confidently as a musician. While this is a desirable and very positive outcome, it is unclear to what degree these conditions will impact players in their future studies and/or within the context of a professional setting.

It would also be particularly illuminating to investigate aspects of Kagarice's pedagogy within another instructional context, such as a public school band program. Can her sensory-conceptual approach and the five-phase instructional approach be used

to teach a group, such as a classroom of beginning brass players? If so, what would the result be in comparison to students taught using a behaviorist, conceptual-only, or sensory-only approach? This would most likely require a large-scale study in which teachers were trained in the various methods and then observed as they worked to apply them to an instructional environment, and so many not be logistically practical; however, this type of inquiry would certainly highlight important issues in terms of how to bring some or all of Kagarice's approach into the field at-large.

Closing Thoughts

No narrative can be detailed enough to fully capture the totality of a teacher's impact on her students, and certainly there are aspects of Jan Kagarice's methods, personality, goals, and philosophical stance which cannot be meaningfully addressed in this paper. Further, having myself witnessed how much her method has evolved since my experiences as an undergraduate member of her studio, I am certain that Jan will continue to refine her approach throughout her teaching career; therefore, the conclusions discussed here are not intended to be a comprehensive representation of her work. Rather, it is the hope of the researcher that the unique perspectives Ms. Kagarice has developed might inspire a meaningful discourse within the field regarding the types of practices and behaviors we, as a community of brass players, wish to preserve and disseminate for future generations of musicians; after all, the teaching studio is the medium by which the art form is preserved and perpetuated.

Foremost, it is clear that performance transcends the physical skills required to operate an instrument. Players must engage cognitive and affective states, as well as apply advanced social skills in order to communicate ideas, work productively with other

musicians, and seek out receptive social environments in which to actualize their work. A fully realized artist is a member, caretaker, and co-creator of the historical canon of musical expression; thus, she/he is rooted in the language of past styles, but must also possess the ingenuity and creativity to re-imagine his/her purpose within the climate of contemporary culture and the possibilities for musical expression in the future.

Can the field of music education, specifically as it is practiced in the private teaching studio, meaningfully address these goals in a practical, ongoing way while empowering students to develop as individuals? Jan Kagarice's model suggests some possibilities in terms of how this question might be addressed. Firstly, she recognizes that musical development is a process which is unique to the experiences of each learner; therefore, the strategies she chooses within lessons are a reaction to her perceptions of the student's needs, aptitudes, and personal goals, rather than a pre-set list of learning outcomes. As one of her students describes, "the way she teaches is completely dependent on the way that her student learns." Jan *teams up* with her students so that learning is positive, meaningful, and practical.

Secondly, her progressive approach to nurturing the expressive voice of her students may illuminate, or even demystify, the nature of creativity in that a developmental process for achieving it can now be suggested. This also serves to codify the component skills which coalesce into a fully actualized artist so that these aptitudes can be targeted throughout the learning process. For educators, Jan's method brings structure and some practical solutions to the core imperative of our field: *What is the nature of musical expression?* It is a state of *unified function* in which the individual is

acting holistically to generate, impart, and realize musical thoughts through the medium of sound.

Thus, from an educational standpoint, the student is trained to act independently through musical experiences which are dynamic and address multiple learning domains throughout the instructional process. By *integrating* thinking, feeling, and doing in this way, Jan effectively and positively sidesteps many of the pitfalls which have formed the grist for the longstanding (but unresolved) debates over physiology and mechanics which exist in our field. Instead of directly instructing students in how to move, Jan guides them toward their own ability to understand and work with the properties of their instrument.

Thus, *form follows function* is not only a *prescription for doing*, but a medium through which the student actualizes their own artist voice. Learning to operate the instrument is integrated with learning to be creative. The embouchure is not a contrivance of specific muscle movements, but a dynamic, adaptable state in which the student practices the ability to physically respond to their own musical ideas with accuracy and efficiency. Perhaps Jan's example can inform new perspectives and definitions of efficient functioning and the learning targets which can be used to achieve it. If we recognize the individuality of each person and the reality that proper *form* is not the same for everyone, we may become better equipped to identify the strategies and behaviors that are helpful to learners and leave behind the quagmire of conflicting details which forms the pedagogical traditions of our field.

What is most important in any discourse on teaching music is the *why* behind the *what*. The beauty of a musically expressive performance is transcendent for all who

witness it, including the performer. As the caretakers of our art form, it is the responsibility – and honor – of music educators to foster and nurture the individual voices of our students. Our actions should always be integrated with this overarching goal. Even so, the necessity of learning technique and the ambiguities of personal expression are seemingly two very different learning goals and experiences, so can be difficult for teachers to balance and manage.

Jan appears to have efficiently harnessed and merged these two facets of performance into a cohesive framework of teaching which addresses the types of behaviors that build creative autonomy and the physical skills needed to realize it. This expands our definition of mastery in that it informs an understanding of the various aptitudes which coalesce into a fully actualized artist. From this model, educators can both set high standards of expressivity for their students, and chart a meaningful and informed path for systematically realizing those goals. Students are then equipped to become lifelong learners and ardent supporters of a culture of musical expression, an outcome which is of benefit not only to brass players, but to all of society.

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APPENDICES

APPENDIX A: Letter of Informed Consent – Primary Subject

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Music as the focus of attention: Kagarice, a case study of a master teacher.

Principal Investigator: Karen Marston, a doctoral student at Teachers College, Columbia University, Department of Music and Music Education.

Purpose of the Study: You are being asked to participate in a research study aimed at understanding your pedagogical philosophy and methods as they are practiced in the applied music studio. The field of brass pedagogy at-large recognizes you as an expert teacher; therefore, a profile of practice which characterizes your methods will serve as an exemplar of effective teaching within the body of research in this area. Based on your success with the rehabilitation of musicians afflicted with the neurological movement disorder Focal Task Specific Embouchure Dystonia (FTSED), an additional aim of this study is to increase knowledge and awareness of the known causes and potential therapies associated with that condition.

This project is a comprehensive, qualitative inquiry aimed at conceptualizing, summarizing, and describing your teaching methods so that they can be disseminated to the field at-large. Your name and detailed descriptions of your practices will be used in the final document. To assure that the findings portray and communicate your philosophies as truthfully as possible, the researcher will triangulate data by asking you to review, comment on, or confirm significant conclusions or assertions.

Study Procedures: You are being asked to consent to the presence of an investigative observer (Karen Marston) for approximately 25 hours of your regular teaching schedule of student lessons at the University of North Texas, College of Music (or your home teaching studio) during the fall 2009 academic semester. Observations will be scheduled in accordance with your availability, but will commence during three site visits of two days each, interspersed equally over the semester. While the researcher is present, your lessons will be recorded to video. Footage will remain private and will be viewed only by the researcher and the participants in the study. No videos will be directly disseminated to a public medium without the express, written consent of the participants; however, the content of the footage will be analyzed and coded as a means to extrapolate and communicate in written form a clear picture of your teaching practices.

In addition, you will be asked to complete three interviews (of no longer than 1 hour each) with Karen Marston, the principal investigator in the study. Interviews will be scheduled at your convenience.

Prior to or during any or all scheduled observations, you will retain the right to withdraw your consent to be observed, video-taped, and/or interviewed based on any extenuating personal or other circumstances which you feel warrant such an action.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: The field of brass pedagogy is currently characterized by a plethora of conflicting opinions regarding a best-practices approach to teaching efficient mechanics and expressive musicianship; therefore, a portrait of practice which characterizes the approach of Kagarice, a pedagogue who has been recognized as an expert by the field at-large, can serve as an exemplary model and a springboard for discussion, analysis, and meaningful progress within the body of research in this area. By consenting to participate in this study, you will directly contribute to an increased understanding of efficient teaching and performance on brass instruments as it can be gleaned from an investigation of Kagarice's methods.

Compensation for Participants: Participation in this study is voluntary. Participants will not be compensated.

Procedures for Maintaining Confidentiality of Research Records: Public presentations of the findings of this study either in written or verbal form will utilize pseudonyms in place of students' names in order to protect their private information. All observation notes, video footage, and other forms of data will be stored on a removable computer hard drive which will be kept in a locked drawer in the researcher's office when not in use. Videos will be viewed by the researcher (Karen Marston) and participants in the study only. At the conclusion of the study, all data will be archived to CD-Rom/DVD and stored in a locked filing cabinet. No information which can be linked to the identity of your students will be publically disseminated at any time without their express, written consent.

Public presentations of the findings will expressly identify (by name) Jan Kagarice as the primary subject of interest of in this study.

Questions about the Study: If you have any questions about this study, you may contact Karen Marston at telephone number 713-898-6047/email klmarston@live.com, or the faculty advisor, Dr. Jeanne Goffi Fynn, Professor of Music and Music Education, Teachers College, Columbia University, New York, NY, at telephone number 212-678-3450/email goffi@exchange.tc.columbia.edu.

Review for the Protection of Participants: This research study has been reviewed and approved by the Institutional Review Boards (IRB) of the University of North Texas and Teachers College, Columbia University. The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Karen Marston has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.

- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.
- Printed Name of Participant

Signature of Participant

Date _____

For the Principal Investigator: I certify that I have reviewed the contents of this form with the participant signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Principal Investigator

Date _____

APPENDIX B: Letter of Informed Consent – Secondary Subjects

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Music as the focus of attention: Kagarice, a case study of a master teacher.

Principal Investigator: Karen Marston, a doctoral student at Teachers College, Columbia University, Department of Music and Music Education.

Purpose of the Study: You are being asked to participate in a research study aimed at understanding the pedagogical philosophy and methods practiced in the applied music studio by Kagarice, Adjunct Professor of Trombone at the University of North Texas. The field of brass pedagogy at-large recognizes Kagarice as an expert teacher; therefore, a profile of practice which characterizes her methods will serve as an exemplar of effective teaching within the body of research in this area. Based on Kagarice's documented success with the rehabilitation of musicians afflicted with the neurological movement disorder Focal Task Specific Embouchure Dystonia (FTSED), an additional aim is to increase knowledge and awareness of the known causes and potential therapies associated with that condition.

Study Procedures: As a student in Kagarice's university and/or private teaching studios during the Fall 2009 semester, you are being asked to permit the presence of an observer (Karen Marston) during your regularly scheduled lesson time. This will occur between 1-3 times at several intervals spread out across the semester. During these periods and solely for the purpose of the study, your lesson will be recorded to video. Footage will remain private and will be viewed only by the researcher and the participants in the study. No videos will be publically disseminated in any way without your express, written consent. In addition, directly following the private lessons during which you are observed (or as soon as is conveniently possible), you will be asked to complete a short feedback form and participate in an interview lasting no more than 30 minutes.

Prior to or during any or all scheduled observations, you will retain the right to withdraw your consent to be observed and/or interviewed based on any extenuating personal or other circumstances which you feel warrant such an action.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: The field of brass pedagogy is currently characterized by a plethora of conflicting opinions regarding a best-practices approach to teaching efficient mechanics and expressive musicianship; therefore, a portrait of practice which characterizes the approach of Kagarice, a pedagogue who has been recognized as an expert by her peers, can serve as an exemplary model and a springboard for discussion, analysis, and meaningful progress within the body of research in this area. By consenting to participate in this study, you will directly contribute to an increased understanding of efficient teaching and performance on brass instruments as it can be gleaned from an investigation of Kagarice's methods.

Compensation for Participants: Participation in this study is voluntary. Participants will not be compensated.

Procedures for Maintaining Confidentiality of Research Records: Public presentations of the findings of this study either in written or verbal form will utilize a pseudonym in place of your name in order to protect your private information. All observation notes, video footage, and other forms of data will be stored on a removable computer hard drive which will be kept in a locked drawer in the researcher's office when not in use. Videos will be viewed by the researcher (Karen Marston) and participants in the study only. At the conclusion of the study, all data will be archived to CD-Rom/DVD and stored in a locked filing cabinet. No personally identifiable information will be publically disseminated at any time without your express, written consent.

Questions about the Study: If you have any questions about this study, you may contact Karen Marston at telephone number 713-898-6047/email klmarston@live.com, or the faculty advisor, Dr. Jeanne Goffi Fynn, Professor of Music and Music Education, Teachers College, Columbia University, New York, NY, at telephone number 212-678-3450/email goffi@exchange.tc.columbia.edu.

Review for the Protection of Participants: This research study has been reviewed and approved by the Institutional Review Boards (IRB) of the University of North Texas and Teachers College, Columbia University. The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Karen Marston has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Signature of Participant

Date _____

For the Principal Investigator: I certify that I have reviewed the contents of this form with the participant signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Principal Investigator

Date _____

APPENDIX C: Secondary Subjects – Short Response Form

Karen Marston

Doctoral Dissertation Project: Observations of Jan Kagarice

Student feedback form (taken from Brookfield, CIQ)

Name: _____

Date of Lesson: _____

Time of lesson: _____

Please take about five minutes to response to the questions below about your lesson today.

If nothing comes to mind for any of the questions, just leave the space blank. Your responses will not be made public and are for the purposes of this study only.

1. At what moment in your lesson today did you feel most engaged with what was happening?
2. At what moment in your lesson today were you most distanced from what way happening?
3. What action that anyone (you or your teacher) took during your lesson did you find most affirming or helpful?
4. What action that anyone took during your lesson did you find more puzzling or confusing?
5. What about your lesson surprised you the most? (This could be about your own reactions to what went on, something that your teacher did, or anything else that occurs).

APPENDIX D: Jan Kagarice's Syllabus for Applied Lessons

Jan Kagarice Studio Syllabus---Spring 2010

Lessons: Each student is registered for 14 fifty-minute lessons per semester. Curriculum (orchestral excerpts, technical studies, and solo literature) will vary for each student, however all students will be playing out of one of the Bordogni vocalise books and should have mastered at least two solo works per semester. Tunes for this semester will be assigned.

Goals Meeting: Will be a part of your first lesson.

Practice: Every student is expected to practice a minimum of three hours per day in addition any other ensemble playing time. If you are unable to schedule this, you need to speak with me immediately.

Scale Juries: Scale juries will be held during dead week and will consist of you playing all major and minor scales in two octaves with accompanying arpeggios. You will also be asked to play twelve different melodies in all twelve keys from memory. I will assign scales and a tune for each week of the semester and you will be graded weekly.

Resume & Recording Project: Each student will prepare a resume and a solo recording with passages of contrasting styles and genres. The recording should contain at least 20 minutes of music. It can include unaccompanied or accompanied playing. This will be due on or before Friday, March 12, 2010. This assignment will be graded as a pass/fail.

Performances: Every student is required to perform a solo piece on at least one departmental. The piece may be unaccompanied, but if it written with accompaniment, you **MUST** have an accompanist. It pays (\$\$\$) to procure accompanists early. I reserve the right to veto your choice of accompanist. Each of you will play a jury regardless of solo recitals, unless otherwise excused.

Trombone Choir: As a part of lessons every student is required to participate in trombone choir unless excused by Profs. Kagarice and Baker. Conflicts with your classes should be handled with your teacher for that class. Trombone choir participation will be reflected in your studio grade.

Personal Protocol: Remember that your colleagues of today may be on the other end of an audition committee some day. Jobs are won by those qualified **AND** who are easy to work with.

Recital Attendance: You are expected to be at all UNT trombone studio required performances unless excused prior to the day of the recital. DMA students are allowed 3, MM: 2, BM: 1 excused absences before your grade is lowered. If you must miss more than allowed and have asked permission **BEFORE** the event, you can "substitute" the recital by attending the dress rehearsal, another recital or listening to a recording and handing in a review of that recital/recording.

*If you have any questions or concerns about this syllabus or your lessons, please contact me directly at Kagarice.kagarice@verizon.net or 940.206.6298. During the day, it will be easier to reach me with a text. If you contact me through email, always be sure to use proper etiquette... "Dear Kagarice", "Dear Professor" or just "Kagarice". Please avoid "Hey" Kagarice. It is particularly annoying to me.

APPENDIX E: Sample Field Notes - Aaron

Aaron, March 10, 2010, 10:00am

EVENT	QUOTES	NOTES
What was your swim lesson like?	Aaron, "Relaxing...it allowed me to understand form follows function in a really tangible way." Because it is more difficult to	
Kagarice explains that the straw in the mouthpiece and pulling it away exercise really helped Julie b/c she has a lot of turbulence in the mouthpiece	Aaron, says it works that way for him too	
They spend a few minutes catching up; Karl explains what he has been playing lately and Kagarice expresses an interest, congratulates him on what's been going well		
They start with just air through the mouthpiece and she is working to get him to make a very clear buzz through the mouthpiece		It sounds very high-pitched and fast when he does it the way she wants him to **Need to get Kagarice on video doing this
Kagarice (to me)	I am going to talk very left brain and right brain to him (global)	
	Form follows function: You have a goal in your mind, but your body has learned it another way, so in the deep brain region, there is a reaction to make a movement When you change the focus of attention to the balance point, it changes everything	
	Aaron, "If you are using too little air, your muscles are going to have to work too hard [in your face], but also if you use too much air, then your body tries to hold it back"	
Kagarice demonstrates the Bernoulli principle – with two papers – but if the papers are already together, and you have to blow them apart, it creates a		

back pressure and resistance that travels back through the body		
Kagarice asks me to explain my def. of resonance (I go into AC/DC current)	Kagarice, "That is exactly my understanding of it."	Karl and Kagarice say that this is helpful
	Kagarice, "You know what's cool? You're a really bad ass player and this [blowing] is not good."	Meaning, once he gets it, he will be a great player!!!!
	We're messing with your air...and it's really messing with you. That's good, change is good. It's messing with your balance and you are sort of between the two."	
	Aaron, "I feel tension in my throat." Kagarice,"No...Karen, when students feel tension in their throat it is because they are finally letting go here [lips]."	So, this is a symptom of holding the air back – have to just think about letting the air go to fix it – the student may not even be aware that they are doing this – especially when there is still tension in the face
Aaron starts a note and gets a "pfa" attack –	Kagarice – There is a message, a direction to create a buzz and that is getting in the way	
	Review this section in the video "We're resetting the system. I promise this is going to get a lot better, but there is going to be a period of transition."	
	The body will find the path of least resistance	
	Aaron "gets it" – things improve – but, she says most teachers would stop here – need to hang with the student and observe what happens – see them through this transition – ZPD – not just getting them there, but guiding them through it	
Time: The body will naturally and easily calculate the distance between beats if you have the idea of the goal in mind – subdivisions are in		

relationship to the next beat – so you need to focus on the path ahead, the goal and let the body figure it out? – Review this on the video		
Think of jumping over a puddle – all you do is look at the other side of it	Kagarice, “I think the most important thing is where you are going.	
	Kagarice, “Keep your brain where the resonance is.”	
	Kagarice, “The air meets the resonance”	
After repeating an air-attack on each note at pianissimo exercise, Karl plays his entire piece, but it doesn’t sound better		Kagarice says it is important to listening carefully as a teacher – even though he doesn’t sound better, he is on the right track in an important way – so have to be comfortable with this transition – not be scared and go back
Also, Kagarice ends with the idea of moving air again		She says this is important because he will no go off and needs to have that as the last thing in his head

APPENDIX F: Sample Transcribed Lesson (Josh)

Josh, March 11, 2010, 9:00am

KAGARICE: E, e-flat...yeah, is that where we're going? Can we do just from the E to the D? Slowly. [straw]

KAGARICE: Do that again, wide open. That's it. Release. [playing] That's better. That's more ringing. Release any instructions...just let the air go. Relax. [playing] And, the next four notes.

[Josh runs an entire section] [Straw in mouthpiece and then a run]

KAGARICE: I would like this, personally, I would like this a little slower...my ears, want it slower...it's not my fault, my ears want it slower.

JOSH: [run piece]

KAGARICE: [straw in mouthpiece demo]

JOSH: [Run again]

KAGARICE: Do less, right through, same again. [false start]
[run of piece]

KAGARICE: Right on it [next section]

KAGARICE: Great, let's just do that much right there. What's the difference between this one and that one?

JOSH: This one is more playful...um...this one is more...

KAGARICE: Yes, it's more. It's a different color in a sense. This is sort of like just stated, and this is just more played with, would you say?

JOSH: It's still got this....[singing]

KAGARICE: What chord is that?

JOSH: Feels like we are picking up momentum.

KAGARICE: I think so too. What's it outlining? What chord?

JOSH: Bb diminished?

KAGARICE: Yeah, I think so too. [plays it on pno]

KAGARICE: Just play melody...make up a melody...

JOSH: [improvises on the tonality...then moves back into the piece]

KAGARICE: So this is definitely part of this...same thing, only instead of doing what?

JOSH: No space.

KAGARICE: Instead of pulling back it actually goes into the next thing, it aligns into the next thing which is definitely more, so this, it may be helpful not only to start softer, but to do what? [to researcher] And, what I am doing is here's a Montessori question -

JOSH: Start at this tempo and move...

KAGARICE: Yes, so I am saying it may also be helpful to start softer, but start what...and I am pointing right at the ritard. So, start slower. Josh can probably vouch for the fact...the Montessori questions are...no one has mentioned yet, I don't think anyone has yet mentioned that I ask questions and then I keep answering them

JOSH: It's brilliant! The Montessori question is brilliant because it's telling them in a way that they feel like they're saying the answer.

KAGARICE: Yeah, you point out the answer. And, it's like hand me your right hand [grabs my right hand] - hand me your left hand [grabs left hand]. You can't really miss it.

JOSH: They feel this confidence because they are the ones with the answer...so, they don't question themselves.

KAGARICE: Yeah.

JOSH: So, if you have them answer the question...

KAGARICE: Yeah.

JOSH: It's just doesn't leave any room for 'maybe I am not going to do what you say' kind of thing

KAGARICE: Yeah, and sometimes people ask questions and the answer is like an opinion...like, 'What's the most important thing in this piece of music?' I think it's...you know. Or, what do you think is the most important thing in this music, and he says the affect or the energy...and I say, yeah, well I think it's dynamics. We might...it might in fact be the same thing, but you are looking for a different word. I hear people do this in master classes all the time, where they get themselves alienated from the entire audience because they ask questions and people answer the way they think and it's not what the person whose doing the lecture wants; they don't want that answer. So, they get in trouble with it. And, then that's where you get a split as well in a studio, where it can feel like you're on call, and it's up to you to answer these questions...you know...

JOSH: Who was hired to do the master class? Is it the students? Why are you asking them?

KAGARICE: Yeah, exactly...You're supposed to know this! Sometimes when a student says, 'I can't do this,' sometimes it's helpful for me to miscount it...or for me to make a mistake on the piano, and they start to realize that she...you know, you don't do it so much that they think your an idiot, but they know that ok, you heard the error. You see, if you didn't catch the error, it was no problem, right? But, the fact that he heard the error showed me that he could count it, and it made him question...well, can't you count it? So, actually, instead of him thinking he had a problem, he's thinking, well actually I did pretty well! It empowers him - he's thinking I am not very good at this, but actually, see...you got that! You know? And so, when you're...I am giving him what I want him to do, but I am making him think it is his idea.

JOSH: I know better by now!

KAGARICE: Yeah, but you have to make sure that it's safe. You have to make sure that they do it and they're successful. It's ensuring success. You have to ensure success. Or, then it becomes...then, there's a fear that's involved.

KAGARICE: I am also going to say something...

JOSH: I've never missed that note before!

KAGARICE: [plays on piano slowly]

JOSH: I guess I don't miss that one because I really like the way it sounds.

KAGARICE: I love that! [continuing to play] Yeah, I like this Poulenc, I like starting this tempo. Don't you? Then, this feeling if this moves ahead, it also covers the intensity, so you don't have to do so much with the dynamics. Can we try that again? [straw] What's the energy? That energy that goes down...that's a tricky think too...you'll do that energy sometimes but it still has to be directed. Sometimes it can be a huge [blows] like a huge pedal note, but it still has to go down the tube.

JOSH: So, we are using this to build the connections of what our body needs to do for each part of the...we are speeding up the process of making that connection [straw]

KAGARICE: [to RESEARCHER] That's the third period of the lesson. Got that? The why. [pno] Go ahead, sorry...

JOSH: [plays]

KAGARICE: Yeah, so it feels like this is going to come down...so I wonder about letting it dimuendo just a little bit and then go into...like almost right in here...later.

JOSH: [singing]

KAGARICE /JOSH: [Imitation with blowing down the straw]

KAGARICE: Do those for me just there. [JOSH plasters the three notes!] Yeah, and that's interesting too...just there [plays on pno then takes straw back to JOSH] Less...

JOSH: [plays]

KAGARICE: Yeah, this feels like it is sort of the same thing...this same passage. Can we go right there? [straw] Relaxation, release [physically manipulates his face] I am jumping in because he needs a little bit of...he's fighting his brain a little bit, and it's nothing he's even tried to do, it's just being around people doing like facial lip slurs...that's it, relaxation, release. Fabulous, fabulous.

JOSH: [plays]

KAGARICE: Say that again! Say that again! Again, it's slow, and then it does what? It's twice double fast, right?

JOSH: I'm kind of doing the Michael Colgrass thing...I am visualizing the page up above me...do you notice me looking up?

KAGARICE: Yeah, and just so you know, it's also good to go side to side because it's an auditory memory

JOSH: Oh! I didn't agree with only doing visual...

KAGARICE: And just also so you know, for some people, it's not up...

JOSH: Really?

KAGARICE: Really. Some people do it back, like Lindberg if you see him he looks straight out and it's because some people look up to the visual cortex - which is back here [points to back of head] and they are looking up and around, and some people look straight back...because it's here. See what I mean? They are looking in the brain for the information.

JOSH: He should have said that!

KAGARICE: I know he should have! That's it! You're looking to the visual cortex...trying to identify where that is in the brain

[straw]

KAGARICE: again

JOSH: [plays]

KAGARICE: So, what's happening here? This goes only to a mezzo-forte [plays pno] so you've got the [plays pno] right? And to me, then the next thing goes into the [plays pno]...this introduction. To me that's all connected.

JOSH: [Sings}

KAGARICE: I hear that it's part of this [plays pno] This is more - instead of stacatto - I think it's more deliberate. Because it never means that anywhere else. [they are communicating regarding interpretation entirely through singing/playing] Do you hear that?

JOSH: I hear it like that, but this part is a new phrase but it's stealing from this...

KAGARICE: Absolutely, I completely agree for sure.

JOSH: Imitating that but a new idea.

KAGARICE: It's coming out of that...[plays pno]...it grows out of this cell...[plays pno]
So this one does it...and it only gets to...I don't think it's as much as this one. I think that's a little bit overrated. Don't you think?

JOSH: It's probably because it's the same idea building through this line.

KAGARICE: I think this one's going to be more and then...

JOSH: It's like this forte is to this mezzo-piano...

KAGARICE: Yes, yes, yes! I understand what you're saying.

JOSH: He just wants that new line to build

KAGARICE: I hear this [singing and playing pno] that's one color, and this is a different [playing pno]

JOSH: It's searching

KAGARICE: Yes, searching [playing pno] and then here it is! This to me is more wondering and less...it's moving [playing at pno] see, even that goes on [playing pno] So, in this second half, I think this can...move ahead, but not a lot, I don't think...this is more than that and more...I think there's more passion, more searching, until...

JOSH: I am wandering, I am questioning, until...

KAGARICE: Yeah. Let's do the while second half of that [straw] Not released, I am looking for a release. There you go. What's the energy for this?

JOSH: [playing]

KAGARICE: I think this doesn't need to go that fast...

JOSH: More deliberate?

KAGARICE: More deliberate.

APPENDIX G: Studio Handout – Trombone Pedagogy

UNT TROMBONE PEDAGOGY (Jan Kagarice): January 28, 2009**Roles of the Teacher**

The teacher's focus of attention must go back and forth between the student and the music/curriculum.

Role Model: The best way to teach is to SHOW BY EXAMPLE

Personal Guide: Know personal details about the student (questions to answer):

Age

Health

Are they physically coordinated?

What sports have they participated in?

Sprinter or endurance athlete?

What type of learner is he/she?

Visual

Auditory

Kinesthetic

Are they right brain or left brain dominant?

How inquisitive are they?

How motivated or energetic are they?

How well can they focus their attention on the task at hand?

How well do they know themselves (intrapersonal)?

How well can the student assess his/her own abilities?

Do they communicate well with others (interpersonal)?

What is their family background?

Do they have a support system of friends and family?

What personal stressors do they feel?

Musical Guide: Be able to assess the student's musical ability and potential

Playing history

Why is the student pursuing a career in music?

What types of music does the student like/dislike?

What is their general musical knowledge?

How well does the student hear?

Pitch

Tone

Stylistic Differences

Musical Line

Meaning in music

What is their general rhythmic ability?

What are their organizational skills?

Do they know how to practice?

How well can they practice?

What times of day are best for their practice?

How long can they practice effectively?

Career Guide: Discuss the students' and clarify the student's career goals, short term and long term.

Attainable?

Feasible?

Curriculum Guide: Agree on a program of study

Curriculum must match the student's skill level

Curriculum should be sequential and incremental (step by step.. no "dropped stitches")

Curriculum should be varied which is based upon the student's interest while guiding them towards a broader musical appreciation.

Warm Ups

Daily Drills

Solos

Orchestral Excerpts

Jazz Standards

Etudes

Lyrical

Facility

General Ear Training

Playing tunes by ear

Matching pitch with a drone

Matching pitch with other trombonists

Matching pitch with other instrumentalists

Matching pitch with the piano

Music History discussion as it relates to their study of solos, etc.

Music Theory- Analyzation as it relates to their study of solos, etc.

Psychologist: Keep the emotional well being of your student as a priority. Guide them to become more well rounded adjusted human beings while knowing your limits and boundaries. Lessons should never become therapy sessions. You are neither trained nor licensed to do this. If you ever sense that the student is in danger of hurting themselves or others, you have legal as well as moral obligations to be sure that they get the professional help that they need.

Physiologist:

Physics and physiology:

How do we learn how to do?

How do we excel at doing?

How do we produce a sound on a brass instrument (trombone)?

How do we alter the sound on a brass instrument (trombone)?

What are some suggestions for smart practice habits that will prevent injury?

Influential teachers of the 20th century

Known because of:

Method

Successful students in noted positions

Word of mouth by students

Word of mouth by colleagues

Writings

Personality

Playing ability

Institution

Self Promotion

Properties of Performance

Concept: *The audiation (auralization) of the musical ideas that we intend to communicate.*

Practice: *Utilization of the concept (putting it into practice)*

Individuality:

Intellectual:

Audiation: hear pitches, timbres and articulations

Know interpretive/stylistic references

Know structural references architecturally, harmonically and rhythmically

Emotional:

Access the thoughts and feelings about oneself and others (humanity) and be open and able to communicate.

○ **Physical:**

▪ *Relaxation*

▪ *Air flow*

▪ *Embouchure (lips in position to respond to the air flow and the auralization)*

Performance = Potential – Interference

From *The Achievement Zone* by Shane Murphy, Ph.D.

Performance: *Audio-Visual Communication from humanity to humanity about humanity*

Potential: *One's ability to clearly auralize/visualize & communicate these ideas*

Interference: *Any thought that is NOT about the communication of the concept.*

—Jan Kagarice

APPENDIX I: Studio Handout – Pedagogical Approach to Dystonia

A Pedagogical Approach to the Issue of Focal Task Specific Dystonia of the Embouchure

Presented by Jan Kagarice

Adjunct Professor of Trombone, University of North Texas

The Goals of this Presentation

- Define Focal Task Specific Dystonia.
- Discuss medical research.
- Examine this disorder from a pedagogical standpoint:
 - Re-examine our understanding of the role of the teacher.
 - Gain a better understanding of how people learn “to do”.
 - Gain a better understanding of brass physiology.
- Assist in educating brass teachers about FTSD.
- Determine possible causes for FTSD.
- Explore possible treatment for FTSD.
- Assist players diagnosed with FTSD in getting help and support.
- Aim to eradicate FTSD.

General Definitions

- Focal: Localized
- Task Specific: Occurs only during a specific activity
- Dystonia: “A syndrome of sustained muscle contractions, frequently causing twisting and repetitive movements, or abnormal postures”. (Dystonia Medical Research Foundation)

Action Dystonia

- Action Dystonia implies an involuntary posturing (dystonia) superimposed on a voluntary movement.
- Task Specific Dystonias are a subset of action dystonias which occur exclusively when performing a specific task.
 - Usually highly repetitive movements
 - Requiring extreme motor precision with an interplay between conscious (feedback-related) modulation and a repetitively executed motor plan. (Uitti et al *Handbook of Dystonia*, 1995)

Symptoms of embouchure FTSD

- Involuntary muscle movements or spasms
 - Obicularis oris
 - Tongue
 - Glottis (modified valsalva maneuver)
 - Jaw
- Embouchure tremor which occurs only during brass playing

Case History of a player diagnosed with FTSD

- “Natural” player/“Well-trained” player
- Something changes the “feel” – different instrument, injury, added stress...
- Notices a difference/problem
- Focuses on the problem and increases practice regimen
- Tries to fix the problem using conventional understanding of brass physiology
- Visits “pedagogues” and reads pedagogical texts

- Fear, anxiety and stress increase
- Problem gets worse
- Embarrassment and self-consciousness increase
- Depression sets in, hope fades
- Problem continues to get worse until it becomes clinical

Onset and Prognosis: As described by Dr. Steven J Frucht et al. in "The Natural History of Embouchure Dystonia" (2001)

- The average age of onset tends to be in the fourth decade.
- Symptoms are often register-specific.
- Symptoms are often style-specific.
- Symptoms develop and progress.
- Symptoms may begin in one style or register, but then progress to the entire range.
- Certain types of "dystonia" are instrument-specific.
 - "Lateral Pull" tends to be more prevalent in trumpet and horn players.
 - "Lip Lock" tends to be more prevalent amongst low brass, trombone and tuba players.
- FTSD of the embouchure is normally specific to playing the instrument but has spread to other tasks.
- "The most effective treatment was retraining their embouchure."

Pedagogy vs. Brass Physiology

- Pedagogy: The art or science of teaching
 - Determining the role of the teacher: the wearing of many hats
 - Guiding the student's focus of attention
 - Focus of attention is the key to all learning
 - The human brain can only consciously focus on one thing at a time
 - Understanding the learning process
 - Identifying appropriate curriculum
- Brass Physiology: How we play a brass instrument
 - How do we make a sound on a brass instrument?
 - How do we alter the sound on a brass instrument?

Physiology: How do we learn "to do?"

- Imitation: The mind has an image of the task to be accomplished.
- Trial and error: The body attempts to "match" what the brain has conceived.

Physiology: Why we play the way we do

- Concept: Auralization of the musical ideas that we intend to communicate
 - Great musicians have great ears!
- Practice: Utilization of the concept
- Individuality: Every person has a unique set of talents and abilities.
 - Intellectually - conception/auralization
 - Emotionally - openness to expression
 - Physically - relaxation, air flow, embouchure/body in a position to respond.

Function vs. Dysfunction

- We must first understand embouchure function if we are to understand embouchure dysfunction.
- Doctors tend to look at sickness and try to describe the symptoms of what has gone wrong within the body.
- Brass players/teachers often teach the symptoms of what has occurred when they have played well.
 - *"The players/teachers do what they do; they tell the students what they think they do; the students then try to do what they think the teachers think they said about what they think they do". - Denis Wick*
 - *"By minutely varying the tension and size of the lip opening, brass players are able to control the frequency or "pitch" of each note." - Dr. Steven J. Frucht quoting Philip Farkas.*
- A description of symptoms is not a prescription for doing.

Healthy Embouchure Function

- The player has good energy flow throughout the body.
- Good use of air: Air freely moves through the mouthpiece and into the instrument to cause resonance.
 - The action is blowing, the reaction is the inhalation.
- Embouchure:
 - The lips are close enough to vibrate as the air passes by them into the instrument
 - Bernoulli Principle
 - The symptoms of embouchure function are the result of the reaction to the air moving past the lips and the player's concept of pitch, volume, timbre, etc....

Focus of Attention: Motor vs. Sensory Neural Pathway (use in motor performance)

Motor

Cable

Accurate & Fast

Einstein Olympian

Sensory

Ordinary phone line

Inaccurate & Slow

Moe, Larry & Curly

A Possible Cause of FTSD

- *Change* causes a disruption of "natural" motor function.
- Player notices a problem in the "feel" and ease of production.
- Player's focus of attention shifts from their auditory feedback to an increased utilization of sensory feedback.
 - Moe, Larry & Curly
- Stress and tension increase.
- Inefficient use of air: Demonstrating the symptoms of a good breath, rather than taking a good breath.
- Player systematically and diligently practices the problem utilizing a variety of faulty theories of brass physiology.
 - A description of the symptoms of good brass playing is not a prescription for good brass playing!
- Negative results cause further negative expectations.
- Dysfunction becomes "hardwired" in the brain as an aberrant neural pathway.

Medical Support

"The sensorimotor learning hypothesis of focal hand dystonia suggests that repetition of temporally related sensory inputs plays a role in triggering symptoms".

-Byl et al., "Learning-induced differentiation of the representation of the hand in the primary somatosensory cortex in adult monkeys", 1996.

Sensorimotor Dysfunction

"The results from this study provide evidence that abnormalities of sensorimotor as well as sensory processing exist in patients with focal hand dystonia".

-Lin et al. "Abnormalities of sensorimotor magnetic fields in focal hand dystonia.", 2004

Aberrant Learning?

The article "Focal Hand Dystonia May Result from Aberrant Neuroplasticity", by Nancy N. Byl, cites more than 10 theories from the medical community for possible causes of focal hand dystonia. She offers an additional possibility: "Aberrant learning is consistent with direct observations and self-reported patient histories..."

Focus of Attention

"Researchers found that, in the subjects paying attention to the (stimulus), activation in the somatosensory cortex region representing the fingertips increased 13 percent compared to activation in subjects receiving the identical stimulation but not paying attention".

-*The Mind and The Brain*, Jeffrey M. Schwartz, M.D.

Recovery

"How well people can pay attention just after a right-brain stroke predicts how well they can use their left hands two years later."

--Attributed to Ian Robertson, Trinity College Dublin by Jeffrey M. Schwartz M.D. from *The Mind and The Brain*

Assessment of a player diagnosed with FTSD

- Be clear about whether or not you can help.
- The more teachers/doctors that a player consults without success, the more hopeless and depressed they will become. They may also pick up further baggage, making them more resistant to retraining.
- Once you have decided that you may be able to help, be sure to suggest that the person visit a medical professional to rule out other possible medical issues.
- Request a complete written playing, personal and medical history including what has been done to work through the problem.
- Assess of the extent of the problem. (intellectual, emotional, physical)

The retraining of a player diagnosed with FTSD

- There is a difference between "Teaching" and "Retraining" (Rehabilitation).
- Once the player has noticed a problem, it instantly becomes intellectual, emotional and physical, and therefore the retraining must also be holistic.
- Educate the player about the disorder.
- Educate the player about brass physiology.
- Begin with total body relaxation/"release" and energy flow.
- The priority should be on building a sense of ease.
- Each step in the process must be successful before moving on, and each additional step must be incremental and based upon matching a portion of the previous step.
- Focus of Attention is the key component to rewiring the brain.
- Each step must become "issue free" before moving on - SAFE GROUND.
- I utilize scalar melodies to assist the player in keeping his focus on communication of sound. (flow is outward rather than perceptive.)
- Distract as much as possible from the kinesthetic feedback. (motor rather than sensory function)
- VERY slowly, the player retrains a more natural motor function.

Cause & Effect

"Maybe focal dystonias reflect use driven changes in cortical representations degrading the fine-grained cortical maps like the colors of a Mondrian bleeding into each other after the rain."

-*The Mind and the Brain* by Jeffrey M. Schwartz, MD. Regan Books, Harper Court 2002. ISBN 0-06-039355-6

Eradication of FTSD?

- Incurable?
- Discouragement leads nowhere.
- We need to remain open-minded and hopeful.
- If even one person has been successful, there is hope.

APPENDIX J: Studio Handout – Dystonia vs Health

<u>Dystonic/Unhealthy Playing</u>	<u>Healthy Playing</u>
Fear	Love
Isometric	Flow
Stuck	Movable
Judgment	Acceptance
Checking	Trust & Momentum
Glass ½ empty	Glass full
Negative Expectations	Positive Expectations
Self-Consciousness	Self Confidence
Something to prove	Something to offer
Perfection and execution	Communication/Meaning
Tension	Relaxed/Energy flow through body
Reactive	Proactive
Focus is on the Problem	Focus is on the Solution
Focus of attention on sensory feedback	Focus of attention on concept ahead
Focus on playing the instrument	Focus on the music
Impatience	Patience
TRYING to MAKE it happen	LETTING it happen

APPENDIX K: Biography of Jan Kagariceng to prove	<u>Healthy Playing</u>
Perfection and execution	Love
Tension	Flow
Reactive	Movable
Focus is on the Problem	Acceptance
Focus of attention on sensory feedback	Trust & Momentum
Focus on playing the instrument	Glass full
Impatience	Positive Expectations
TRYING to MAKE it happen	Self Confidence
	Something to offer
	Communication/Meaning
	Relaxed/Energy flow through body
	Proactive
	Focus is on the Solution
	Focus of attention on concept ahead
	Focus on the music
	Patience
	LETTING it happen

APPENDIX K: Biography of Jan Kagarice

Jan Kagarice is currently Adjunct Professor of Trombone and Chamber Music at the University of North Texas where she maintains a full studio. She has also served as a visiting professor at the University of Minnesota and at the Hochschule fur Musik in Detmold, Germany. Additionally, Kagarice has given recitals, master classes, and lectures at numerous colleges and music festivals in the United States, Austria, Brazil, Canada, Denmark, England, Finland, Germany, Italy and Poland.

Jan was a founding member and bass trombonist of the internationally acclaimed PRISMA trombone quartet and has performed with the Dallas Symphony, the Fort Worth Symphony, the Chautauqua Symphony and the Boston Philharmonic. She holds a Bachelor of Music from New England Conservatory and a Masters of Music from the University of North Texas. Her principal teachers include John Swallow, John Kitzman, John Marcellus and Arnold Jacobs.

Kagarice has a unique ability to help players who are experiencing performance difficulties. She attributes this to a combination of factors: her Montessori teaching experience, her study with Arnold Jacobs and her own struggle with neuromuscular disease. Jan currently serves as the chair of the International Trombone Association's Committee on Focal Task Specific Dystonia and is an artist/clinician for the Conn-Selmer Instrument Company.

(University of North Texas College of Music, 2008)